YACHTING

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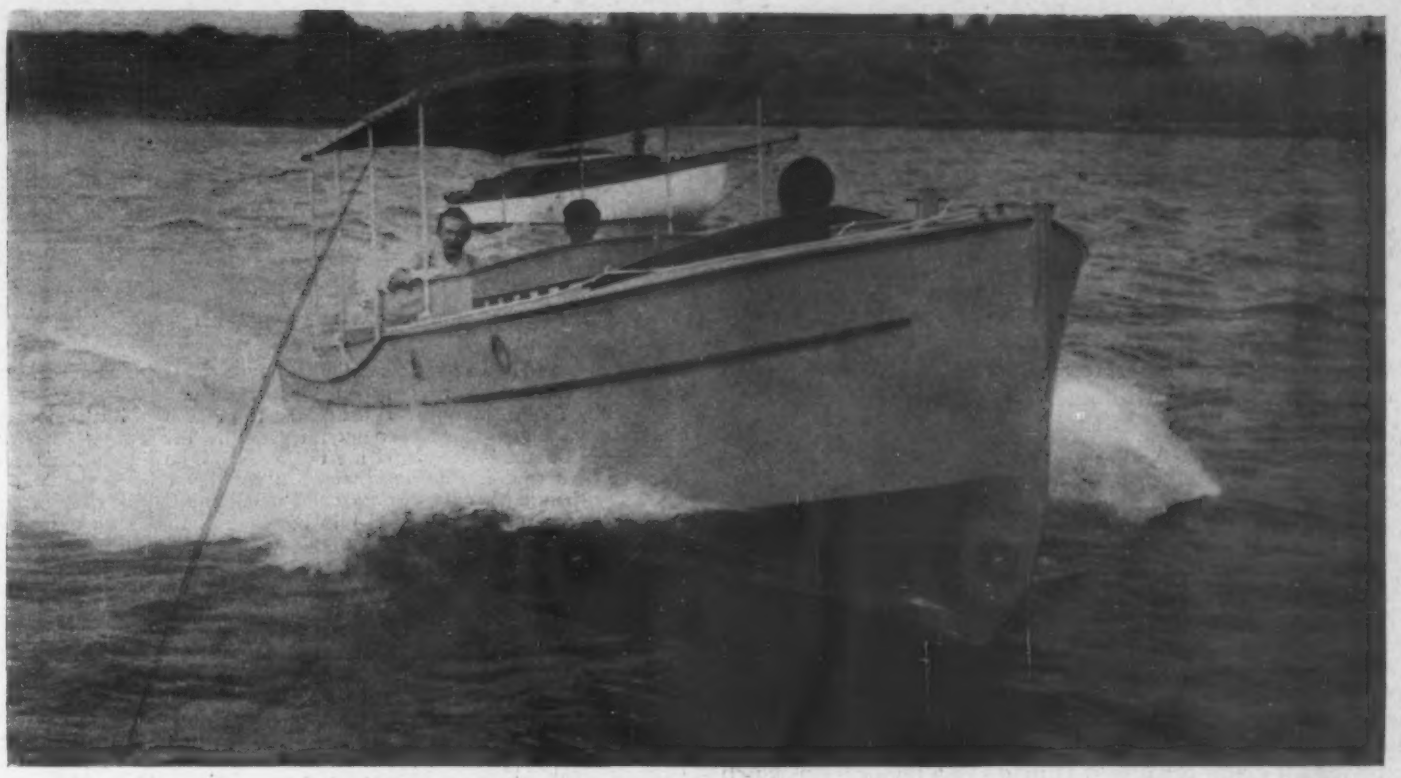


THE V-BOTTOM BOAT, EASY TO DRIVE AND AN EXCELLENT ROUGH WATER MODEL, IS ONE RESULT OF THE APPLICATION OF NAVAL ARCHITECTURE TO MOTOR BOAT DEVELOPMENT

How Bad Business Methods Hurt the Sport

There has been a growing tendency in the last few years on the part of certain unscrupulous builders of inferior boats and engines to make all kinds of extravagant claims for their product in their endeavor to market their goods and catch the uninitiated. The prospective buyer is offered no protection. Some buy because the price is abnormally low, others because they do not know any better. How these people do business, and the effect of their methods on the purchaser and on the sport of boating at large is told in this article.

By HERBERT L. STONE

IT is generally admitted that crooked or bad business methods in any line of endeavor react, in the long run, on those employing them. One cannot do business on the basis that everyone who buys his particular product is legitimate prey, and continue to get away with it indefinitely. Even the "goats" learn wisdom after a time, and, as the result of their experiences and the publicity given them, the succeeding generations become more sophisticated. If this were all there is to the question it would not pay to waste paper and ink upon it. But there is another side of the matter, and one that has far-reaching consequences.

In the January issue of YACHTING, in the first article of this series, we showed certain bad conditions that exist at present in the building and selling of both boats and engines. These sore spots, if they might be termed that, consist in the placing on the market of inferior and poorly built boats and engines by unscrupulous makers, carrying worthless and irresponsible guarantees, in competition with those that are honestly built and conform to recognized standards. The reasons for these conditions existing were explained, and the direct effect they had on both consumer and competitor.

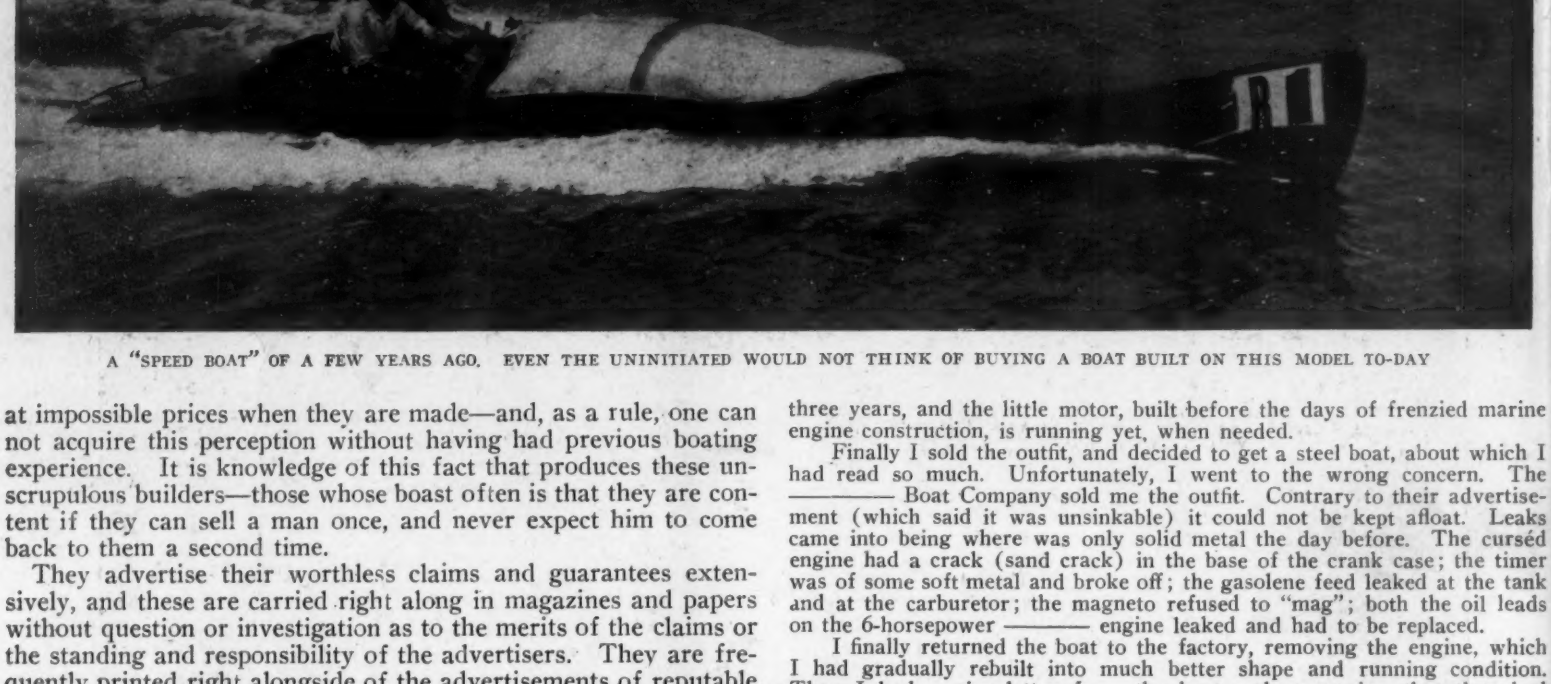
It is the province of this article to go even further; and to show that these conditions affect not only the two parties directly concerned in the transaction, but that indirectly they have a very harmful influence on the whole sport of boating.

CATCHING THE UNINITIATED

It is obvious that those who make and sell an inferior article, and one that is not built to do the work that is asked of it, do so with the idea of catching the newcomer and the unsophisticated. This is usually the man who is buying his first boat or engine, and who, consequently, does not know the difference between the good and the bad, and what are the vital points that he must look for. He is attracted by the low price and the printed guarantee that frequently accompanies it, without knowing the reputation or reliability of the makers.

These men are the recruits to whom organized boating must look for its future growth and strength; and if they are "stung" in their very first outfit, they not only get "sore" on those that sold them the gold brick, but usually become disgusted with the sport itself and distrustful of all those connected with it in a business way, not realizing that they themselves may be in a measure to blame by their too great eagerness to get a bargain-counter outfit below the legitimate market price. Their experiences frequently deter others from becoming boat owners, for it is well known that a "knock" will go round the world twice while a boost is getting under way.

It is only by knowing what constitutes good practice and recognized standards in both boat and engine design and building that one can buy intelligently and can recognize extravagant claims



A "SPEED BOAT" OF A FEW YEARS AGO. EVEN THE UNINITIATED WOULD NOT THINK OF BUYING A BOAT BUILT ON THIS MODEL TO-DAY

at impossible prices when they are made—and, as a rule, one can not acquire this perception without having had previous boating experience. It is knowledge of this fact that produces these unscrupulous builders—those whose boast often is that they are content if they can sell a man once, and never expect him to come back to them a second time.

They advertise their worthless claims and guarantees extensively, and these are carried right along in magazines and papers without question or investigation as to the merits of the claims or the standing and responsibility of the advertisers. They are frequently printed right alongside of the advertisements of reputable manufacturers of honest products, to the detriment of and in direct competition with the latter, as it is impossible for one not familiar with the reputation of the two firms to know which is good and which is bad. Very often, also, more credence is given to an extravagant claim because it is made in a publication which is supposed to be familiar with conditions and to stand for honest methods.

IMPOSSIBLE CLAIMS AND GUARANTEES

One can pick out any day advertisements of engines said to be a certain horsepower that are sold at a price not only far below the average price of engines of that size, but even far less than that at which a machine developing that power could be sold.

Those who have been in the game for some time know this, and realize that the engines will not develop the power stated or turn up the required revolutions, or that they are of such poor and soft material that they will not give satisfactory service.

Then, one constantly sees impossible guarantees for an absurd length of time; guarantees on which no attempt can be made to "make good." In the automobile field a guarantee of one year is about as far as even the makers of the best engines will go; yet five-year guarantees are frequently made by makers of marine engines, while "guaranteed for life" is a not uncommon expression—whether the life of the purchaser or of the engine, and what the latter may be, is not stated.

It would seem as if magazines devoted to boating interests should at least see that their readers are protected from manufacturers resorting to these and other unscrupulous methods.

"BUYING" EXPERIENCE

To show just what one gets up against when he falls into the hands of those who do business on the basis of dishonesty and misrepresentation, read the following letter from a man in the Middle West, who has written us an account of what he went through in getting started in the power-boat game. His experience is typical of the way these "guarantee men" do business:

Editor YACHTING:

DEAR SIR:—Some years ago the Bug bit me, and I saw an "ad." As a young and very economical physician I found I could "save two-thirds the cost by building the boat myself," and the outfit came "with only a few nails to drive, etc., etc." (For more explicit instructions see ——— advertisement.) After sacrificing more profanity than usual, overlooking many golden opportunities to rupture myself in straining and lifting, carrying a set of badly bruised and splinter-bedecked hands, I employed a carpenter to complete the job. And he did it right. I used the boat for three years, and the little motor, built before the days of frenzied marine engine construction, is running yet, when needed.

Finally I sold the outfit, and decided to get a steel boat, about which I had read so much. Unfortunately, I went to the wrong concern. The ——— Boat Company sold me the outfit. Contrary to their advertisement (which said it was unsinkable) it could not be kept afloat. Leaks came into being where was only solid metal the day before. The curséd engine had a crack (sand crack) in the base of the crank case; the timer was of some soft metal and broke off; the gasolene feed leaked at the tank and at the carburetor; the magneto refused to "mag"; both the oil leads on the 6-horsepower ——— engine leaked and had to be replaced.

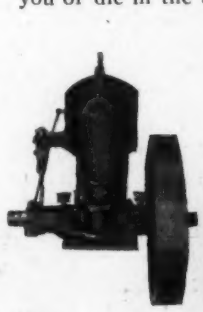
I finally returned the boat to the factory, removing the engine, which I had gradually rebuilt into much better shape and running condition. Then I had a nice letter from the boat makers, saying that they had tested my boat in their testing tank, and it did not leak or sink. I made them a present of it.

Then I bought a hull from a reputable builder. This gave me good service with the 6-horsepower engine from the *steal* boat, and by renewing the various parts of the engine as they went to the bad I had a season of boating. But in the middle of the next season the engine refused to answer the door-bell. By taking it apart I found that the lowest piston ring had broken, together with a portion of the piston. The guarantee had not expired, and the engine went back to the factory, where, of course, the "experts" decided that it *was not defective.* But the best of the story: While my check for the repairs, marked "in full of all demand," had cleared through my bank, I received a bill from the firm asking for a balance of 50 cents due them.

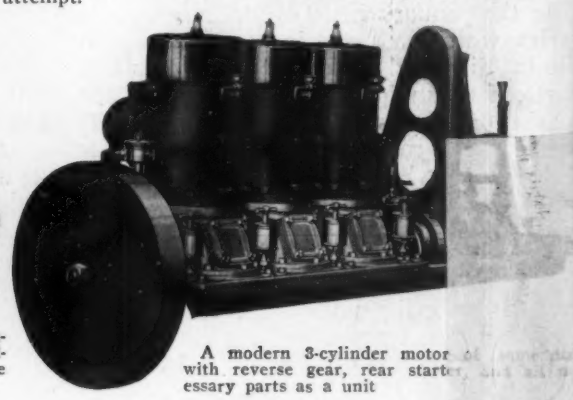
Well, that was some discouragement, all right; but in the meantime I had written about my experience, and a builder named Smith (it wasn't his name but we will call him that, anyway) wrote me in full accord with my misfortunes, and wanted to build me a boat. I had a three-cylinder engine that I had purchased cheap—so cheap engine, plus the inducement, equaled an order for Smith.

As time went along, Smith assured me that he was doing business on small capital, and that a little remittance on account would fall like gentle dew (due) from heaven; so I remitted. Then he discovered that the three-cylinder engine was worthless (after having it all winter), and that I must buy a two-cylinder, 12-horsepower ———. Now I will say this for Smith, he sold me the ——— engine at the price it cost him, but I was out the price I had put into the three-cylinder save $40 that I finally forced Smith to allow me for it.

The new boat arrived. It was a single-step hydroplane. It was the finest specimen of woodworking (in boats) that I have ever seen. Constructed of quarter-sawed oak, Valsparred until it looked like a piano, it was a peach! But it did not plane; in fact, 8 miles per hour was its limit. When I wrote Smith, he agreed that he had made (quoted literally) "a mistake, perhaps several of them; but I am going to build you another boat, free of charge, and yet another if necessary, for I am going to please you or die in the attempt."



One of the first engines built by a well-known marine engine firm 8 years ago.



A modern 3-cylinder motor [illegible] with reverse gear, rear starter [illegible] essary parts as a unit

A TYPE OF CRUISER WHOSE EFFICIENCY, HIGH GRADE OF WORKMANSHIP AND E XCELLENT DESIGN CANNOT BE MISTAKEN

He ordered me to burn up the old hull. (Aye, aye, sir, it am burnt.) Then he asked me to send him the ——— engine to mount in the new boat. I did. During the winter he wrote me at length; offered me the price I had paid for the ——— engine, to apply on *absolute cost price* of another make of four-cylinder, 24-horsepower engine. Well, it made a difference of $180, but I had heard so many glowing reports of the new engine that I said "go to it."

Passing rapidly over events, the new hull and engine were to be in my hands not later than May 1, 1913. Toward the end of April Smith wrote me that the outfit was "ready to ship, and please send a little on account," and I let loose another hundred beans.

May 1, no boat; May 15, no boat; June 1, no boat, and I threatened to send a man down there to see what was the matter. This had the effect of causing Mr. Smith to confess to me by letter that he had been forced into bankruptcy, and that *my boat and engine were tied up by due process of law as a part of his assets.*

Well, Providence watches over children and fools. I am not a child, but Providence watched over me, for I came into touch with a lawyer who happened to be the attorney for Smith's creditors, and who is a fine gentleman though he *is* a lawyer Through him I managed to obtain my outfit by paying the final balance of $80 plus and his modest fee of $25—which came later. He held up the money that I had paid him until I received the outfit early in July, and when I found that the boat had been sent without coils, batteries, wiring, etc., he sent me a check (out of my $80) to repay the $30 that I had to expend in completing the outfit.

But the boat runs all right. It does but little more than half of the 30 miles an hour that were guaranteed; but it is a *boat;* it does not sink nor leak, and whilst Smith did not do several little things he promised to do, still I can do them at odd hours this winter, and the exercise will do me good.

It may occur to you that I should have a guardian after falling for so many things. Unfortunately a busy physician has scant time to become an expert criminologist or skilled lawyer. He generally pays his bills, and spends more time worrying about the outcome of his "cases" than he does about his finances.

Now see if I am a really and truly motor boat bug. I am into the game quite a good bit over a thousand dollars, and my outfit is worth perhaps $700 retail. I have access to the river Sunday afternoon only, from 1 P. M. until 6 P. M.. Five hours a week. Perhaps a hundred hours per season. Looks like my boating fun cost me $10 per hour, does it not? Almost as expensive as stopping in the Walled-Off-Castoria in New York City. But I like it!

F. S. O'H.

Isn't an experience like this enough to discourage anyone? Most men would quit the game in disgust, except where, as in the case of the writer of this letter, the virus has worked so strongly into the system that they cannot be kept off the water by such little obstacles as these. But, just such treatment has prevented many a man from becoming an enthusiastic boatman.

FINANCIAL RESPONSIBILITY ESSENTIAL

On the other hand, one could have nothing that shows more forcibly than this the advisability of inquiring into the financial responsibility of those from whom one buys so important a thing as a boat or engine. Not only must this responsibility be sufficient to cover the actual delivery of what is ordered, but it is also necessary that one should be assured that the firm from whom he buys will be able to *make the necessary repairs, supply defective or broken parts, and make good on any legitimate guarantee it may make.*

Many a man has bought an engine, only to find that shortly afterwards the company that made it had gone out of business, and that he was no longer able to get spare parts, and that, consequently, his repair bills were much higher than they should have been, and that his motor had depreciated in value by reason of being an obsolete make.

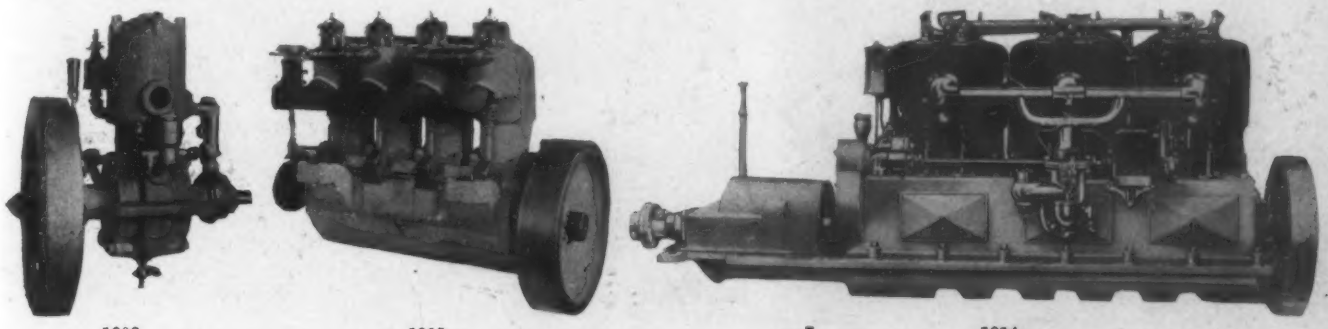
This, of course, can happen without any malicious intent on the part of the makers, but nevertheless emphasizes the fact that one must make sure of the standing and reliability of the manufacturer with whom he deals.

Nowhere does reputation count for more than in the building of boats and engines. It is a tangible asset, and a boat or engine bearing the name-plate of those builders or manufacturers whose methods and product stand high in the trade always has definite value, no matter how old it may be, while the stuff from an irresponsible maker who takes your money and the bankruptcy law at the same time cannot be sold for junk.

The following letter, which has recently come to us, is a typical illustration of the disadvantages of dealing with firms whose resources and complete reliability have not been thoroughly investigated in advance. In this instance one will note that the buyer had the pleasure of putting his motor together himself, to say nothing of the annoyance caused by a multiplicity of delays:

Let me tell you a lesson I received this past season.

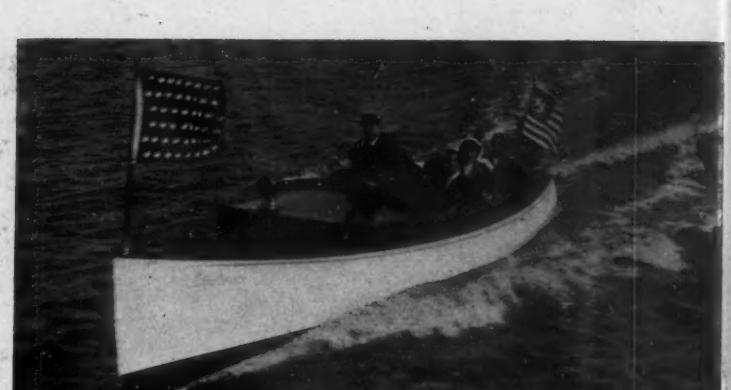
Last July a firm in ———, N. Y., advertised a four-cycle engine, 16 horsepower, and all complete for $148. I "bit" and invested in one. I received the engine after



1902 1905 1914

TWELVE YEARS' EVOLUTION OF ONE FACTORY THAT HAS DONE MUCH FOR THE DEVELOPMENT OF THE GASOLENE MOTOR

A FAST RUNABOUT OF TEN YEARS AGO WHICH NO BUILDER WOULD PERPETRATE TO-DAY

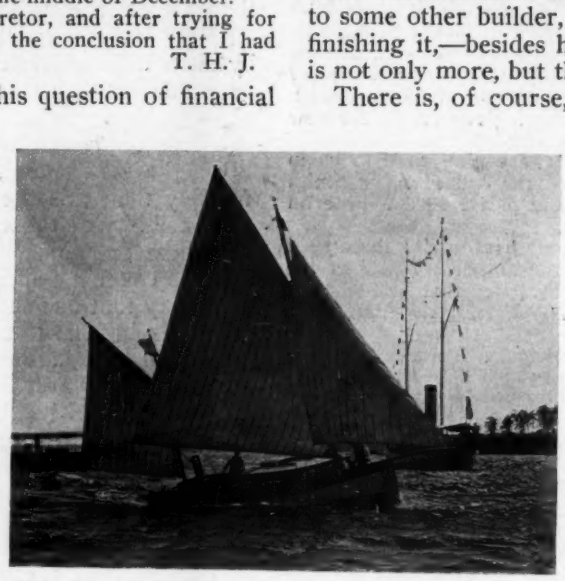


A MODERN 30-FOOT BOAT OF APPROXIMATELY THE SAME TYPE, SHOWING A PROPERLY DESIGNED HULL, MORE COMFORTABLE ACCOMMODATIONS AND EQUAL SPEED

waiting six weeks. Two weeks later I received a clutch from Detroit, and about four weeks later I was notified by a firm in Brooklyn that the carburetor had been sent, and that I would receive it in the course of a few days. It has not reached here yet, though it is the middle of December.

I installed the engine with another carburetor, and after trying for two weeks to get it going properly I came to the conclusion that I had been "done." Sincerely yours, T. H. J.

There is, however, another phase of this question of financial responsibility, and one that puts it squarely up to the purchaser himself. This is in connection with the building of boats to order, and the insistance on the part of the owner that the contract be placed with a builder whose price is far below that for which the work can be properly turned out. The result is, obviously, a job that is never satisfactory, and that usually costs more in the end than if a fair price had been paid at the outset.



ONE OF THE FIRST SMALL AUXILIARIES BEFORE THE GASOLENE MOTOR CAME INTO USE. A NAPHTHA ENGINE IS SEEN AFT

As an example of how this works, a man went recently to one of our well-known naval architects and placed an order for a 35-foot power cruiser. The plans were decided upon and sent out to the various builders for estimates. These came in ranging all the way from $2,000 to $2,700, the latter figure being the very least that the boat could be built for if built *right;* and the average between these figures was a fair price for honest work. There was one bid, however, for $1,200.

The boat could not be built for this, and the designer knew it. The owner said that it looked good to him, and, though the architect warned him what would happen, he said he was willing to take the chance.

GETTING SOMEONE ELSE TO FINISH THE JOB

Well, the order was placed, and long before the boat was finished, but after half the contract price had been paid the builder failed. This usually means all kinds of legal complications with the man's creditors, the removal of the partly built boat to some other builder, and paying to the latter his own price for finishing it,—besides heartbreaking delays. The cost in the end is not only more, but the work is never as satisfactory.

There is, of course, no hard-and-fast standard of prices for either boats or engines. They can be built more cheaply in some places than in others, depending on the local cost of material and labor; on the quantity in which they are built; on the efficiency and standardization of the factory and shop, and on many other things.

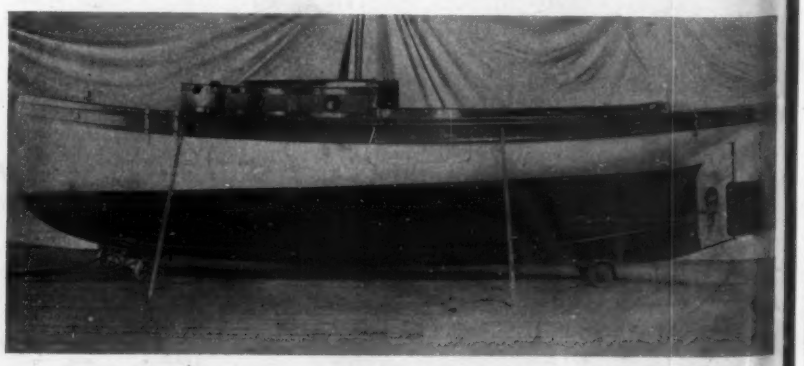
Good boats can be built cheaply and reliable engines can be had at a low price. There is a larger demand for a moderate and low-priced outfit than for any other kind, and this demand is being satisfactorily filled by boat builders and engine manufacturers who build on integrity and sell on actual worth; but they do not make false claims for their product, and the basis on which they do business is economy of manufacture, rather than a skimping of material and false statements.

They don't guarantee horsepower that is obtained only at impossible engine speeds; they don't specify aluminum bases that turn out to be only cast iron covered with aluminum paint; they do not send out engines "completely equipped" with half the necessary ignition or carburetion outfit missing, and they are willing and able to "make good" on everything that leaves their factory.

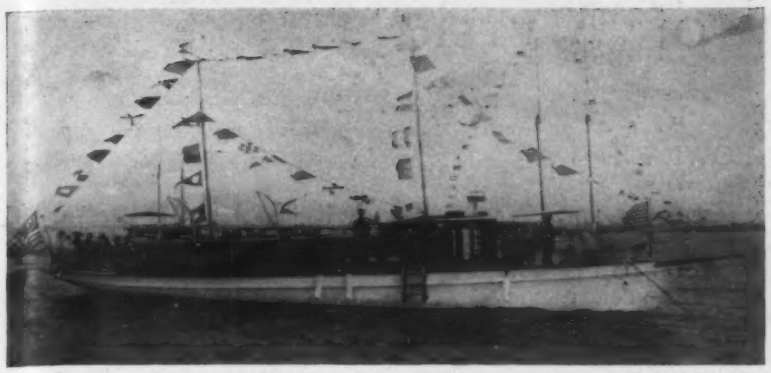
INDIRECT EFFECT OF UNSCRUPULOUS METHODS

What we have said so far in this article has had to do with the direct influence of this "crooked" dealing on the purchaser—on

ONE OF THE FIRST OF THE TWIN-SCREW MOTOR BOATS. TWO NAPHTHA ENGINES INSTALLED AFT



THE FIRST TRUNK CABIN CRUISER THAT DISPLACED THE GLASS CABIN BOATS



THE CLASS CABIN, CLIPPER BOW AND COUNTER STERN OF THE EARLY DAYS OF GASOLENE MOTORS. HAVE HAD TO MAKE WAY FOR THE BETTER DESIGNED, MORE EFFICIENT "DAY BOAT" OF THE PRESENT

the man that puts his hard-earned money into a boat and engine for his leisure time because he loves the water, and because the sport appeals to him. There is an indirect effect of such conditions, however, that may not be quite so clear to the purchaser. This is in the harm that is done to the reputable manufacturer by this unfair competition of the unscrupulous builder or dealer, against which he is afforded no protection.

As we pointed out in the last issue, the whole development of the motor boat from a hybrid, unsightly craft to the present efficient, seaworthy boat, and of the marine internal-combustion engine, is due to those who have built the best they knew how, and have sought rather the perfection of what they made than immediate profit. To those men, in other words, who have applied science and brains to the problem. It has cost them money and much labor to produce the dependable gasolene engine of to-day, and the men who did it are those who are now building engines along recognized standard lines. The parasites who are trying to reap the profits have never turned a hand toward the improvement or development of their product.

Thus, if the full support that is due those who, by bringing about the development of both boat and engine, have made power boating in all its phases so popular to-day, is denied them, it is clear that any further evolution along these lines will be both slow and unsatisfactory. It costs money to experiment with new designs, and many a firm has spent more than a year's profit in bringing out a single new model with the ever attendant risk that attaches to it. This is something that the get-rich-quick builder will not do.

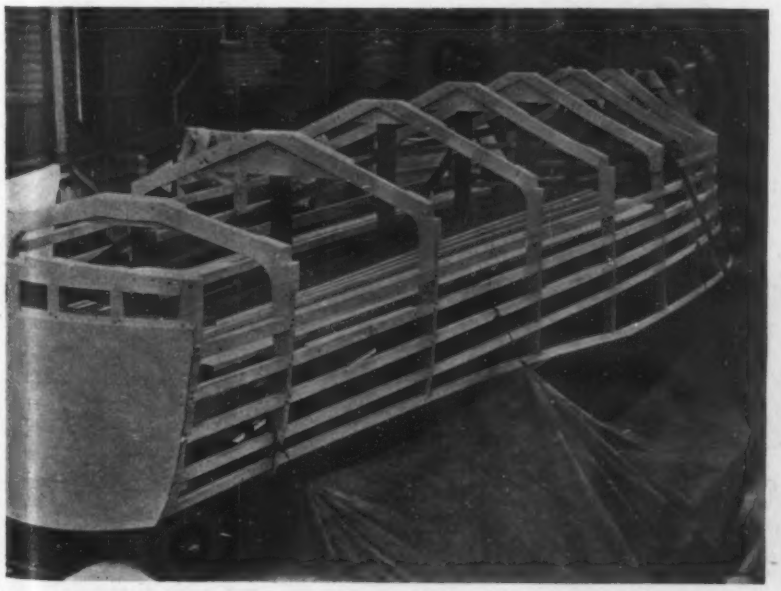
WHEN THE V-BOTTOM MODEL WAS FIRST TRIED SOME STRANGE EXAMPLES OF THE TYPE WERE SEEN

We believe that when these facts are thoroughly understood that they will go a long way toward mitigating these bad conditions about which we are talking, and instilling into the buyers and builders the knowledge that the standard sought after should be *how good, and not how cheap.*

It should also be the province of those publications which are devoted to the interests of the sport, and those that participate in it, to take a definite stand in this matter for the protection of their readers and of those who have placed the sport on a firm foundation by honest building and fair dealing.

YACHTING can assure its readers that it will use its influence to the utmost degree for the changing of such bad conditions as have been cited here, and for their protection.

Not only will this policy be followed in its editorial columns, but its advertising pages will also be restricted to those firms on whose honesty, integrity and reliability its readers can depend.



BUILDING A V-BOTTOM BOAT. EVEN TO THE NOVICE GOOD CONSTRUCTION IS APPARENT HERE

BUILDING BOATS FROM STOCK MODELS IN A WELL-APPOINTED SHOP. HIGH-GRADE WORK AT MODERATE PRICE CAN BE HAD BY BUILDING IN QUANTITY

In the next issue of YACHTING we will tell HOW TO BUY INTELLIGENTLY. This article will show the reader just what vital points to look for in design, workmanship and equipment, so that he can avoid such experiences as related here.

The Sagacity of Myrtle

The Truthful Tale of a Knowing Old Sloop that Could Take Care of Herself—and Us

By JOHN T. ROWLAND

MYRTLE was not a lady—no disrespect intended, old girl; I simply mean to imply that you were not of the *genus homo.* Nor yet was she a cat; in fact, there was nothing feline about her, either in rig or in nature. But she *was* extremely feminine in a staid, matronly sort of way. Her generous bulk, billowy mainsail and dinky gaff-topsail, perched aloft like a Delft cap, suggested the general style and contour of a buxom, placid Hollander *frau* going a-marketing.

She was a splendid boat to instill into the young idea a wholesome taste for real ships and shiplike gear. None of your new-fangled iron turnbuckles on her shrouds! Deadeyes, rove with hemp lanyards exhaling a healthy reek of tar, rejoiced the senses of the real sailorman as he breasted her generous freeboard. Also, she boasted a pin rail for her halyards, which all belayed forward; and she steered with a massive carved oak tiller, worn smooth in the grip of many a sturdy toiler of the deep and briny.

There was nothing labor-saving about the old packet. Most of her gear you could not have harmed with an axe; but it was all there when you wanted it, and nothing ever jammed. Like Kipling's Three Decker, "—it took a watch to steer her and a week to shorten sail." Bowl bowed, oak timbered and heavy planked, when she took the bit in her teeth on a quartering sea, with the spume flying to leeward and her gaff-topsail stretched tight against the peak halyards aloft, you had to hook both paws around the old oak stick, brace your feet, grit your teeth and *p-u-l-l!*

Ah! there she drops her broad old stern into the trough! Now for a moment's respite while her bow pays off and the wave crest licks at her forefoot before you nerve yourself for the back-breaking strain of the next forward rush!

Myrtle's jib slid on hanks. Moreover—oh! smile, ye weakling sycophants of an unregenerate age—it was fashioned of 10-ounce duck (full weight) and carried a row of reef points about one-third of the way above the foot. We cluttered her forepeak with no storm canvas for a blow, but met what the Lord sent us with the clothes she had on her sticks.

Worst of all—now comes the show-down—there was only a single straight-haul lanyard on her whale-of-an-old centerboard. For, be it confessed, Myrtle was not a stately schooner in the Down-East lumber trade, nor was she even one of the big coasting sloops that one sometimes would see only a decade ago on Long Island Sound—built in the historic days of water transportation to carry the produce of whole farming communities to the heart of old New York. No; Myrtle was only 28 feet on deck, but every inch a ship.

You see, during her lifetime and my captaincy I became so accustomed to assuming the defensive against public opinion—usually that of tidewater "pups" who sailed *skim*-dishes or finned abortions—that I cannot wholly avoid that strain even now. It was as though the whole world was against us; but we went our solitary way, the old girl and I, and rescued the scoffers when they capsized.

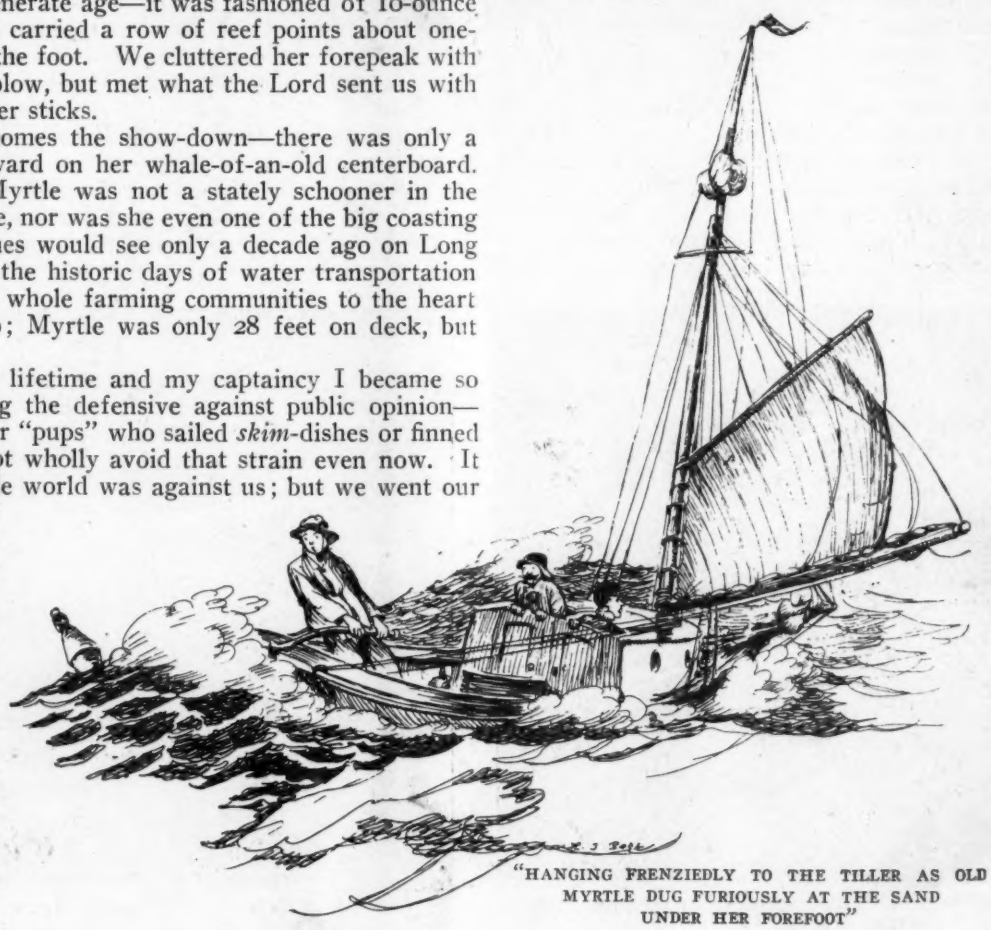
Through the still weather of midsummer she lay longest at her moorings and accumulated grass and scorn while the butterflies of a season fluttered about, doffing their snow white caps to every white cloud, and stripe-flanneled youths —fuzzy as to the nether lip—made her the butt of lisping jest. But when this nauseous crew was fled to the shelter of shipyard and dormitory; when the north wind spoke stern and the stars came out of nights to dance in clear, cold skies; when the coot clan gathered its countless clacking cohorts to fleck with gray the steely Sound over Stratford Shoals, *then* was the season of our full content! New halyards, a new mainsheet, reefing pennants ready rove and some grub in the cuddy; it was:

"Let her go, go, go, go away from here;
At the other end of the Sound she's overdue;
'Send the gale is fair behind you
When the autumn lust shall find you
And the sea gods call for *you!*"
(Regards to Mr. Kipling.)

Just one point more, and then we shall get to some action. It is in the nature of a confession. Her name was not really Myrtle —delicacy forbids. But she was built by a genuine old Yankee sea-dog, the kind who actually wore brass ear-rings and swore by foreign gods; so it might perfectly well have been Myrtle, or Hannah or Jane. Thus let it appear.

Most remarkable of the old sloop's characteristics was her sagacity. If it is indeed true—as why should it not be?—that the artist breathes something of his own being into his beloved creation, then surely some old captain had endowed with profound sagacity and sea-wisdom this darling of his old age—namesake for the wife of his youth.

Shouldering her way through a fleet of numbskull upstarts (craft devoid of tradition) she seemed the very incarnation of past days of mystery and glory—clipper bow, aspiring bowsprit and sweeping sheer, with its characteristic lift at the main rigging like the rise of a thoroughbred's shoulders, all conjured up memories of the clipper-ship age and of record-breaking China voyages in the tea and spice trade.



"HANGING FRENZIEDLY TO THE TILLER AS OLD MYRTLE DUG FURIOUSLY AT THE SAND UNDER HER FOREFOOT"

Now and then some vapid, modern youth inquired smugly why I did not "get rid of the old tub and build a boat to race in the X or Y or Z class."

"Devil take you and your racing classes and all such codified gibberish; mine it is to know and to love the sea and ships. *Keep* your water jockeying and your silly games!" Thus he was answered.

No tyro needed ever to worry, once sheltered in the old sloop's ample cockpit; if human skill failed, Myrtle would find her own way, faithful and sure as the gray family horse. One black night she brought me safe through Fisher's Island Sound in a

howling southeaster, without chart or binnacle light, over the low places in a couple of dirty reefs, and out past the leeward end of the Dumpling. Again, a harbor thief stole her anchor while all hands were asleep. Myrtle drifted soundward with the tide towards a nasty line of rip-raps, but hooked her bowsprit shrouds over a channel buoy as a last resort, and so hung up in deep water unscathed.

Even when a stream of drift ice once made her part a rusty mooring chain and a strong wind swept the harbor, she averted disaster by picking the single sandy spot in a mile of rocky shore line to drive ashore upon. There I found her next day at low water, inclining gently to starboard, with her sails and gear still shipshape and Bristol fashion, bowsprit pointing skyward in an attitude of Budda-like indifference to matters mundane.

Then there was the time she spewed out some old caulking, but put off sinking until shoal water was gained, when she went down like a plummet, and grounded with decks awash. But why multiply cases? The personality of ships—real ships—is far too well recognized by all who have ever gone down to the sea, to require my affirmation, even in this foolishly wise twentieth century of Grace.

Yet a particularly magical cruise comes always to my mind when those glorious days of Homeric fancy are recalled—days of golden youth, when each new sandspit was a Bahama Key and the wind, soughing through some old wreck's bleaching frames, chanted the requiem of a Raleigh or a Drake.

It was at the extreme upper end of Chesapeake Bay that the great adventure began—the present scribe was one of a ship's company of three, the other two being skipper and mate. Their names were *not* Rube and Wad, and they were very wise in world wisdom. Rube had been an officer-man in the Philippines, and Wad was a naval designer,—the cook's helper, bosun's mate and crew, kept his face battened shut and his eyes and ears peeled wide open.

"I FELT CONVINCED WE WERE FAR AT SEA"

The particular evening we recall began with a thunderstorm—just at sunset—unseasonable in that late month of October. Accustomed to the Sound variety, we anticipated a squall of only a few minutes' duration, and Wad, navigating officer, neglected to note his position before the rain struck in, so rushed were all hands at clewline and d o w n h a u l. Straight south we scudded under only a reefed jib, with loose rope ends streaming out ahead like homeward-bound pennants and all the universe beyond a five-foot radius sunk in the smother of spume and spray.

Minutes passed; less frequent the lightning flashes grew. Rain turned to hail, and we shivered under our oil jackets, while the wind went from nor'west to north and nor'nor'east, but abated no whit. Daylight turned to gray and gray to black. Still we crashed ahead madly, blindly; rushing down the steep slopes at dizzying speed, vying with the elements' strife in the turmoil of our flight.

Did a pound-net stretch prohibitively across our erratic course? Myrtle's oaken stem burst its feeble web asunder, leaving thereby a sure heritage of ire and blasphemy to some slouching fish slaughterer.

"That is the general direction down the bay," quoth Rube, giving me a course; "so long as she doesn't bump dry land the chances are good she'll hurdle the high spots."

Just then, "Breakers ahead!" shouted Wad from forward, and a moment later, "Breaking water to starboard!"—and "Hold fast!"

A mighty shock hurled Rube and me across the cockpit. He was on his feet again like a flash, yelling to know if Wad was still with us.

"I'm all right—shot into the jib!" Wad's voice reached us faintly in snatches; "Seems to be—deep water ahead—will she—cross country?"

To my dazed senses there seemed nothing in the world but wind and water—water underneath, on top, on all sides; quiet water which stood up to my knees; flying water, which drove past my face; white water, which stretched vaguely to starboard and to port.

Hanging frenziedly to the tiller as old Myrtle dug furiously at the sand under her forefoot with each successive sea's scend, I was hazily conscious of the skipper poised crouching on the cabin top, gazing ahead.

"Hell, she'll go over! Slack your mainsheet, Kid!"

Dumbly I obeyed; saw him swipe downward and out with his sheath knife at a sail stop, as the boom swung off; and suddenly a great vague cloud reared itself overhead.

Rube leaped down into the cockpit. "God Almighty set that sail, all right!" he laughed; "Gimme the stick, Kid! Look out, Wad, if the mast goes! Hi! *you* Myrtle; go it, old girl!"

A moment the good ship stood on her nose. Wad

"THE RELICS ON THE COCKPIT FLOOR"

swears to this day she stuck her bowsprit into the gravel; then, with a rush, the bow lifted and she shot ahead, over the sandspit and into deep water beyond.

"Now, how in hell are we going to furl that sail?" howls Wad, crawling aft out of the maelstrom at her bows.

"We ain't, me lad! Leave her went! As the stick is there yet, it may stay some time!"

A few minutes of mad career; then Rube——

"Is that a steamer's lights dead ahead?"

Wad: "Yeah!—Another over there—and—by God!—one to port!—Whole damn Baltimore fleet!"

"How nice," in a pleasant roar, "we must have got back into the channel."

"It's damn narrow, though! Holy Moses!" A blinding flash that seemed to carry actual weight behind it struck us full in the face. The steamer had picked us up with her searchlight.

The skipper afterwards confessed that the picture it made almost frightened him. It showed a high, steep, combing sea—a sea gone mad and lashing itself into a fury—sheeted spray and rain driving before the gale, and at the center of the spotlight a great balloon of canvas dragging its attached hull over the seas as a thistledown might trail its stem.

The steamer tooted, presumably an offer of assistance; but we shot past, and a minute later she could not have come to us had she tried. Another pound-net had loomed up ahead, Rube had tried to edge out into deeper water, and in doing so had come squarely atop the end stake, a post some six inches in diameter, driven solidly into the sand. Myrtle rode it down, but it snapped up again alongside and ripped out the foot of the mainsail as cleanly as though done with a knife, leaving the sail secured to the boom only by clew and tack. Instantly the gashed foot gaped wide open and the bellying sail began to struggle and thrash.

"Now we *must* get her in!" shouts Rube. "Set up on the lifts, Wad. Kid, take her and keep her dead before it. Don't jibe her now, or you'll be left all alone."

How that herculean task of furling was accomplished, I knew not. Doubtless, old Myrtle's creator had "fisted" many a topsail in winter gales off the Horn. Something of the same blood was in her crew that night. Men can perform in the darkness feats that would dismay under daylight. Fighting, clawing, struggling, balancing on one foot over almost sure death, and hanging on by the eyebrows when hands and teeth were full of sail; somehow they managed to reduce her bellying mainsail to a trim bundle along the boom.

The night seemed suddenly tame by contrast. Myrtle ambled easily along with "the race and rip of a clipper ship in running her easting down."

Panting and spent, the skipper and mate dropped into the cockpit for respite. Presently, "She's not really going at all now!" says the skipper, revived.

"No; hangs too long in the trough; apt to get pooped."

"Let's give it to her, double reefed."

"Right-O! Reef it is!"

That proved the ideal combination, with sidelights burning bright, stray rope ends secured, the dinghy hauled aboard and a small rhomboid of canvas silhouetted against a clearing sky. Myrtle was a respectable ship once again; her mad spree ended. Distant shore lights were picked up and identified, and a course laid through the wide lower bay. A faint suspicion of dawn showed to the east.

"*You* turn in, Kid," said Rube.

That next day of wonders! The marvelous sunrise over a high cloud bank, the occasional glimpse of a far-off, low, sandy shore, fringed with strange trees; but above all the wide sweep of open sea and the swinging, tireless stride of our good ship before a steady breeze—never hurried, never slow, speaking of infinite distances and mighty voyaging.

We ran on ship's routine; struck the bells—on a basin—scrubbed decks and polished bright (?) work, changed the watch and relieved the wheel. Also, the officers spliced the main brace and commented on the weather and the day's run, as all officers should do. Evening saw us drawing in on the land again near York Spit—the East Shore no longer visible.

All day the wind had held fair and steady; now it grew light. The stars came out bright. It was a balmy, peaceful night, and I sat down beside the tiller and got very sleepy. That would never do to be found *asleep* at the wheel! I stood up and attempted to dance a jig, but that seemed to interfere with my steering. Presently I discovered that one could even go to sleep standing up.

The compass seemed to fog every second if I did not blink my eyes. Slowly the half hours dragged by and at last 10 o'clock actually came. I waked Wad. He came up and stretched; asked some questions about the lights then visible, and told me to get him a glass of water. We had finished the keg for supper, but there was a big jug stowed forward. I had put it there. Now, lo and behold! it was empty. The spare anchor had shifted and cracked in its side!

At sea without water! I reported to the watch officer, in awestruck and guilty tones, conscious of my dereliction in not properly securing the offending anchor, and secretly glad the skipper was not awake.

Mr. Wad took the news, I thought, rather calmly. "Hell! and I'm dry as a paint brush. Bring me those last two bottles of beer and the flask." It was rather chilly by now.

"Well," I thought as the water lapped sleepily against the vessel's skin at the head of my bunk, "if she keeps moving at all, daylight ought to see us in Hampton; so we won't have to die of thirst—probably."

* * * * * *

Several ages later I was awakened by uncouth noises, and was amazed to see stars still shining in through the hatch diagonally overhead. From the cockpit came strange sounds of ribald song and laughter.

"Say, Rube; that Back River light has two lamps. No, by the Great Horn Spoon! there's three of 'em! How many do you see?"

"Oh, *damn* Back River! It's the mouth of the James, I tell you; you're a great navigating officer! Maudlin on duty, too! Tush! tush! my lad, you ought to have a copper-lined interior like mine. Now, the more of this mountain dew I absorb, the soberer and the thirstier I get. How! as we say in the na*vee; how!!*" (Shanty-skipper-solo):

"Oh! the Dreadnaught was sailin' off the Long Island shore,
And the seas from her scuppers in torrents did pour;
She is bound for the northard of ice and of snow,
For the cold coast of Greenland; Lord God, let her go!"

(Chorus (*all officers*).

"She's the Liverpool packet; Lord God, let her *go!—ee*-EE-*OW!!!*" and more *ad lib.*

"Now we will probably fetch the coast of Africa," I thought, "as this parboiled bunch is sure going smack out to sea. Be great if we only had water enough! Still, leave it to Myrtle; it's up to you, old girl!"

Pretty soon accumulated sleepiness had overcome even the bursts of crashing wit on deck, and I fell once more plumb into the "arms of Murphy."

* * * * * *

The sun was shining across the centerboard trunk into my bunk. Now, as the said bunk was on the port side, this could only mean that Myrtle was headed northwest, and as she was quite evidently not at anchor, this was a circumstance difficult to explain—unless one went on deck; seemed to be no great urgency, but perhaps I had better. By Jove! there are *two* sets of snores issuing in swelling chorus from the far side of the trunk.

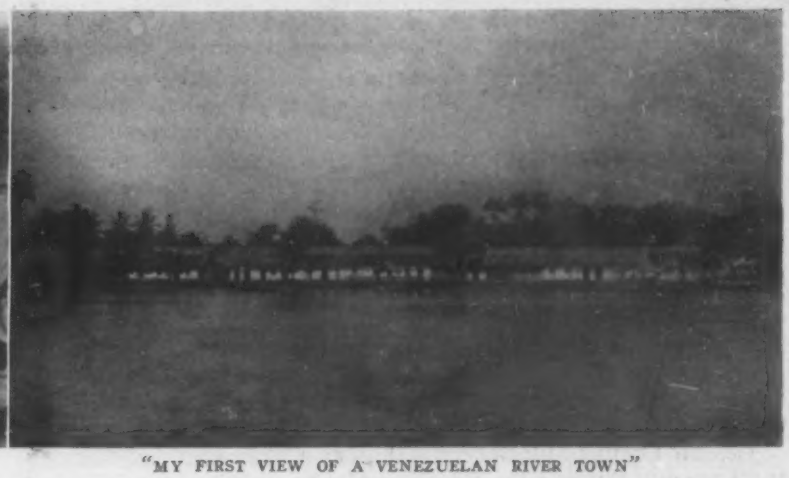
Underway, unmanned and headed northwest! I tumbled out, head over heels, and scrambled on deck all primed to avert shipwreck or catastrophy; and, arriving there, saw—nothing.

Nothing, that is, but sky and sea, flecked with a light breeze, and gently heaving in its slumber. Then I looked at the relics on the cockpit floor, and sat down and laughed.

But mirth gave place to more serious considerations. Evi-

(*Continued on page* 112)

THE DECK OF MIN-MO ON OUR TRIP UP THE SAN JUAN



"MY FIRST VIEW OF A VENEZUELAN RIVER TOWN"

The Wanderings of Min-Mo Under the Southern Cross

Part II—The Voyage to Port of Spain on the Deck of a Steamship and Our First Wanderings in Venezuela

By T. C. MORRIS

IT was February 17th when I rejoined the Min-Mo at Perth Amboy, having left her there the previous week after bringing her up outside from Delaware Breakwater, as related in the last issue. I had said farewell to those members of my family I had not seen before my hurried departure from Maryland, and was very anxious to get the yacht to Brooklyn and aboard the steamer that was to take her to South America.

The Min-Mo was still in the dry-dock, so I had a chance to look her over. I found she had been coppered to above the water line as a protection against the teredo, and a new bronze rudder and outer bearing shipped in place of the old ones. She was looking very well. They had also made a complete set of wire screens for all doors and windows. This indicated a mosquito country to me, but I recollected that there is also Jersey, where I am told these little birds of prey are sometimes in evidence. I found everything belonging to the yacht had been boxed or crated, except her anchors, which were still on her bows. The compass adjuster was there, and had brought down a new compass, so as soon as the yacht was floated she was taken in tow by one of the dock company's small tugs and towed out into the Raritan to allow him to adjust it.

It was a very cold, though bright, day, with a high nor'west wind going, so this job was attended with certain difficulties; however, the compensations were figured at last, and we were towed back to the welcome shelter of the dry-dock. The old compass was found to be worthless, so I concluded we must have played in exceptionally good luck to have brought the yacht through at all.

In the afternoon all the boat's stuff was loaded, the smaller boxes going below, the more bulky ones on deck. The steamship company insisted upon having *everything* boxed or crated, so the boat was absolutely stripped. However, having a "hunch," I hid an anchor and 50 fathoms of cable in the run, where it was not discovered, and this ground tackle I found most useful on our arrival at Port of Spain, Trinidad.

We had arranged to have Min-Mo towed to Pier 24, Brooklyn, where the s.s. Mayaro was lying, and accordingly at 10 o'clock that night the tug took us in tow, the lines were cast off, and we started on the second leg of our long journey. We were towed through the Kills, where we were protected from the wind, and the water was smooth; but when we crossed New York Bay it was rough enough, and the heavy boxes on deck made the yacht roll badly. As the weather was very cold, the spray froze on the glass so that we could not see with the windows up, and nearly congealed with them down. There were times when we could hardly see the tug's light to steer by. About 3 o'clock the tug ran up alongside a fleet of barges, which offered us some protection, and we tied up for the rest of the night.

Having made fast, we went aboard the tug and sat around in the engine room for the sake of the warmth. Nobody had thought to have a lunch put up, and by this time we were very hungry, but all we could do was to hope for daylight, which came, as it always does, if one is patient enough.

As soon as it was light enough to see, we started again, and about 7 o'clock turned into the slip, ran alongside the Mayaro and passed up our lines. It was bitterly cold, wind still blowing hard and the slip was full of crushed ice, and, while ice in that form usually looks good to me when mingled with other things, I really didn't see anything to admire in that particular lot.

The captain of the tug and I got ashore and found a place where we could obtain a hot—a very hot—Scotch; then a restaurant on Atlantic avenue, where we got breakfast. About 10 o'clock they passed slings over the side and began to hoist the boxes, etc., on the Mayaro. Meantime one of Merritt & Chapman's big cranes had come in, three sets of slings were passed under Min-Mo, the winch started and the boat was lifted, swung around and deposited in her cradle on Mayaro's deck with no trouble at all. Then a heavy derrick spar, with its pivot and blocks and falls, was shipped, as the ship's cargo booms were not strong enough to lift the yacht overboard when she reached her destination.

Just as the lunch bell rang, the Mayaro began to back out of her slip and started for a warmer climate. Soon we were running down New York Bay before the wind, and I amused myself for awhile trying to guess where we had run to the memorable night we knocked around these waters trying to find an anchorage. Off Sandy Hook we passed the masts of a sunken schooner covered with ice; it was a rather desolate sight.

The short winter day was drawing to a close as we left the land, but, as night fell, the flashing beam of Navesink seemed waving us good-bye. In a couple of days the temperature had risen very much; the sea was smooth and the sun was shining bright and warm. The little yacht was an object of much interest to the passengers, and everyone of the men visited her. Capt. Kirkby, of the Mayaro, however, used to stand and look at Min-Mo and wish he didn't have such a deck load.

We had a splendid trip down, not even a day's rough weather, and in due time sighted Sombrero Light. The next morning I had my first sight of the tropical islands as we passed to the westward of a string of them. We made our first stop off the harbor of St. George's, Grenada, where the pilot and health officers boarded us. We steamed slowly in, and I was very much interested in the

appearance of the place. The inner harbor is entirely land-locked and so snug and small there is barely room for a ship to warp herself around. It was my first view of a West Indian town, and I was much interested in all I saw, from the old French fort on the hill to the little naked niggers diving for nickels from the jetty. The customs officers were looking at Min-Mo with as much interest as I was looking at their town; the Collector sent word that he would like to inspect her; so at 4 o'clock he came with a number of officials, and I showed the boat to an admiring audience. They were sure she would be just the thing to use as a revenue cutter. I told them there were plenty more like her at home. It seems there is lots of smuggling among the islands, and, as their only equipment consisted of one ancient schooner, they are not able to do much to prevent it.

We left Grenada that evening, and at 4 o'clock in the morning were passing through the Dragon's Mouth, and I was standing at the rail admiring the beauty of the South American mountains, as it was bright moonlight and the outlines showed clear and sharp; soon the lights of Port of Spain were shining in the gray dawn, and by 6:30 an anchor splashed down, and the voyage on the Mayaro was finished.

My next few days were spent trying to get the numerous packages belonging to Min-Mo assembled and passed through the customs, and, as all were wrongly marked, there was a lot of red tape to be untied.

The steamers lie to an anchor about 1½ miles out, and freight is unloaded into sailing lighters, big, ungainly, open sloops, manned by a crew of chattering West Indians, and, as the trade wind blows off shore, the lighters usually sail out to the steamers and are towed back by a tug to the wharves. The British Government has a very good custom house and an efficient harbor police stationed on the long jetty; also a wireless station.

Taking the advice of a friend, I had myself measured for a number of suits of drab khaki and white linen, as one or the other seemed to be the usual dress of those going across to Venezuela, where we were to take Min-Mo to the works of the asphalt company at Guanoco; the khaki for work, and the cool white duck for evening wear.

By degrees the stuff belonging to Min-Mo got ashore and was sorted out in a pile in the American warehouse. Leave having been obtained to move from the anchorage in front of the custom house, the yacht was taken alongside the jetty, her stuff unpacked and stowed away and the crew shipped; then back again to her anchorage, where the gasolene could be taken on board. This done, and the water tanks filled, the ice and provisions came over the side, and by sundown we were ready for sea.

Meantime I had been joined by Captain G. G. Westcott, also a Marylander, who had come over from Guanoco to help get Min-Mo ready. When everything was aboard we ate our last meal at the Queen's Park Hotel and drove down to the jetty at 10 o'clock, where, calling a boat, we were taken out to the yacht, and about midnight broke out the anchor and headed for the mouth of the San Juan, 60 miles across the Gulf of Paria. The course from Port of Spain is W. by S. ½ S., and after clearing the shipping the Min-Mo was put on her course and the jingle pulled.

There was not much wind, and what little there was was astern, so we had a rather smooth crossing, though we had several rain squalls; one in particular looked so bad that, having had experience on the Chesapeake, I wanted to head into it, but Westcott told me it would not amount to anything, as it seldom blew very hard on the Gulf.

Daylight found us on the San Juan River bar and the land just showing to the westward. All along to the right was a chain of mountains forming the backbone to the Isthmus of Paria, separating the Gulf from the Caribbean Sea, while the land ahead was low and swampy and covered with mangrove trees. By 8 o'clock we were in the mouth of the San Juan, having run through a small fleet of the bright-colored nautilus, or Portuguese man-of-war, each with its little sail spread.

The San Juan River, 45 miles up which Guanoco is situated, is very deep and crooked, and has a ripping tide. This was against us, of course, so our speed was considerably cut down. There is a guard house at the mouth of the river, and we were obliged to stop to have our papers examined, and, as the yacht was flying the American yacht ensign, a Venezuelan soldier with an antiquated Mauser and bag of cartridges was put on board, after which we were allowed to proceed. Just what the soldier was supposed to do with his rifle I don't know, as he at once put it in the cabin and sat around chatting in Spanish with one of my sailors who could speak it.

We ran on up the river through a wall of green; no growth but mangroves and salt palms. The tide, falling, exposed mud flats, on which were many water birds, the scarlet ibis and white, gray and blue herons, flying up as the boat approached. Lots of wise-looking pelicans, with their ridiculous pouched bills, were diving after fish, apparently turning a somersault each time they struck the water, and the scissor-tailed hawks were sailing around looking for dinner, while above a pair of frigate birds wheeled slowly around, though I didn't see either of them make a dive.

About 2 o'clock we saw a board nailed to a tree at the mouth of a caño, saying: "Carner Point-Guanoco;" this was where we turned in, and four miles up the caño was the village of Guanoco, the wharves and plant of the New York and Bermudez Asphalt Company. We ran alongside the wharf and tied up, and I had

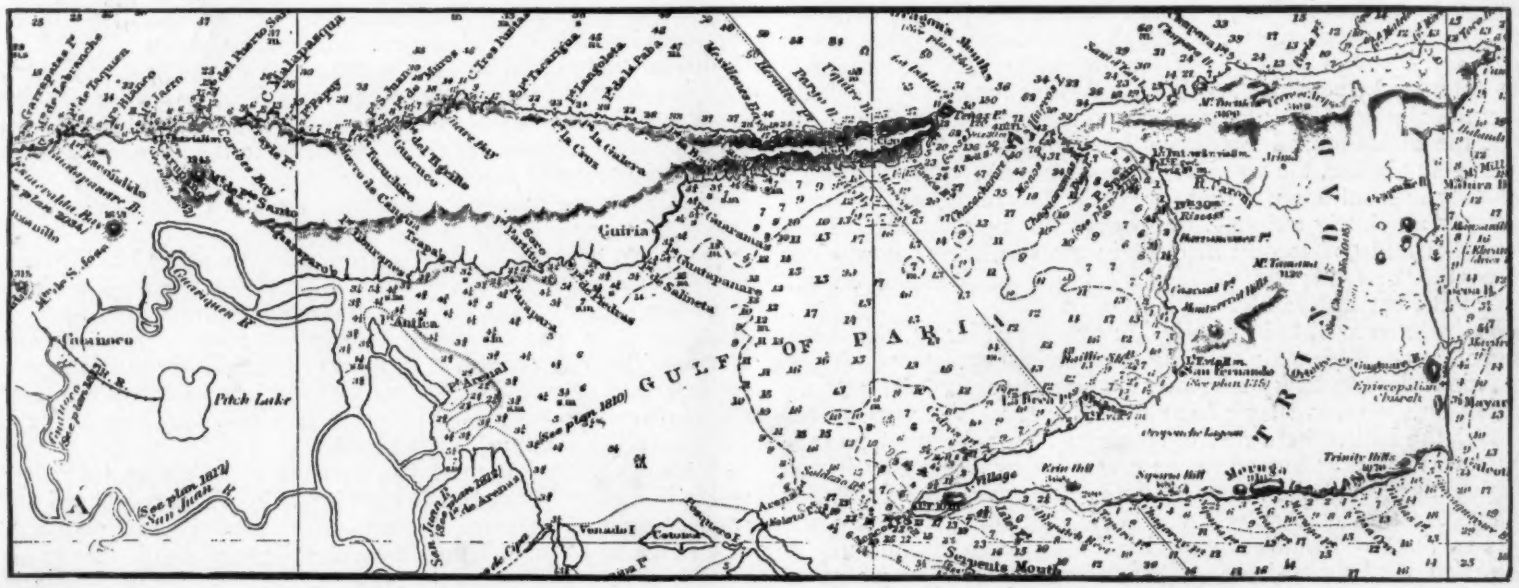


CHART OF THE GULF OF PARIA, SAN JUAN RIVER, AND THE VENEZUELAN COAST

my first view of a straggling Venezuelan river town.

I was warmly greeted by several men I had known in the States, who were also here in the employment of the company, and everybody flocked down to see the new boat.

Guanoco is the shipping point for the pitch dug from the big asphalt lake about 7 miles up the river and brought down in trains. As this place would be my headquarters for several months, I was, naturally, much interested in the plant, but deferred my inspection for another day. A pair of piles were shown me further up the stream which offered better moorings than the wharf, as I found there was a rise and fall of over 12 feet in the tide, so the boat was run up to them, moored with slip lines from bow and stern, and my first day's voyage in South American water was ended.

The first few days after arriving at Guanoco were spent in putting the yacht in shape. Not having been overhauled for months, her trip down had left many and various scars on both paint and varnish, and she looked very disreputable. Accordingly, having shipped two native deck hands for a permanent crew, we fell to work, and in the course of a week the little ship began to look like herself. My Venezuelan guard made himself very useful, and, finding he was handy with rope, I showed him how to make rope fenders, and he turned out several very neat ones.

In the meantime the attorney was making out provisional papers, in order to have the boat entered in the Venezuelan custom house, and one day I received a Venzuelan ensign; so I folded up my U. S. yacht ensign and hoisted the other. The guard was taken off and returned to his station, and I was notified to be ready to take my first trip at 6 o'clock the next night.

My soldier lad, whose name was Simon, seemed sorry to go, and we knew the reason when we saw where he had to live. To my great surprise, he bade me good-bye in very good United States; up to then he apparently could not understand a word of English. How foxy! He was evidently instructed to listen to our talk and report. The one idea the Venezuelan seems to have is that every boat is either a smuggler or gun runner.

Along in the afternoon we went alongside the jetty, filled gas and water tanks, sent to the works for a supply of ice, and reported "ready" to headquarters.

We left the jetty about 6 o'clock at night, our objective point being two of the camps, to which we were carrying an inspector, geologist and general manager. As long as we were in the river, all we had to do was to keep going down; there are no bars or shoals, so the 45 miles in the river were easy, the only things we had to watch for being logs, small rafts and the native dugouts. As none of the latter carry lights, it is very difficulty to see them. owing to the deep shadows thrown by the dense masses of mangrove trees, until one is almost in collision.

At the mouth of the San Juan, where it empties into the Gulf of Paria, there is a wide flat, part of which is bare at low water, the

THE SKIPPER LOOKING OUT FOR SHOALS

MIN-MO BEFORE SHE LEFT "THE STATES"

edge being marked with a private can buoy. Back of this flat is the Caño Aritigna, with a four-fathom channel running through the bar. Of course I did not know a thing about it, but we were supposed to go through that night to save time; two of my passengers said they knew exactly where to turn, the mark being an opening in a clump of trees.

By the time we arrived there it was all of 10 P. M., and the mouth of the river, exposed to the trades, which that night were blowing particularly fresh, was perilously rough. I do not much fancy trying to cross any bars at night; however, orders were orders, so when the particular clump of trees showed up against the sky, we turned in, rang for half speed and began sounding. It was not long before we were in very shallow water and feeling around for the channel; this we could not find, and, as the water was only seven feet, I concluded we were in wrong, so turned and held out again.

Then it was decided that there must have been a mistake in the landmarks, so we went on a mile or so further, when another clump of trees showed up, which was, without doubt, the proper one; so we tried again, and again struck shallow water, the four-fathoms channel having apparently been misplaced or gone visiting. By this time I was pretty nervous, and jumped when the leadsman sang out: "Breakers," and there they were, sure enough, and too close for comfort, so I lost very little time backing away. We then turned and put out for Tigre Point and deep water, having had quite enough of trying to get into an unknown stream in the night.

We anchored under the point for the rest of the night, and when morning came we saw the real opening in the trees about five miles from where we had been trying to locate it. I may add that since then I have been in and out many times, day and night, and I don't quite know how we escaped getting hard and fast ashore that night.

We continued the trip next morning with no further trouble, visiting the different camps, and in due time arrived back at headquarters. I had made notes of landmarks and—when crossing the Gulf—the compass courses, so that on subsequent trips I was able to depend on my own pilotage.

A description of my weekly runs would be tiresome. I had to carry the paymaster, and often mechanics, bits of light machinery, provisions and supplies of various sorts, and every few weeks the superintendent or general manager, or both, and *always* the mail.

I rather enjoyed the life; I was getting plenty of sailing, had a good boat and willing crew, it being no trouble to get sailors, as life (for them) on the Min-Mo is much easier than working on their trading vessels, and the pay and grub much better.

We would sometimes see ducks sitting on the mud or logs at low water, or flush them out of the trees if the tide was up, and the gun was kept handy, for duck always tastes well and is a pleasant change from the everlasting canned food. At this time of the year we rarely saw any but the old drakes, as I imagine the females were busy hatching their eggs. I found them extremely hard to kill, though I use a twelve-bore Le Fevre, full choke, and No. 4 and No. 2 shot, driven by 24-grain Ballastite.

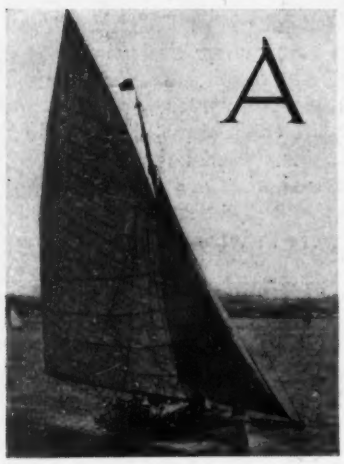
(*Continued on page* 112)

WHERE THE BROAD PACIFIC BREAKS UPON THE NORTH END OF NEW ZEALAND

CAPE REINGA, ON THE NORTH COAST OF NEW ZEALAND

Yachting in New Zealand

By W. F. COLLIS



A MULLET BOAT OF NEW ZEALAND

As a yachting center, few places south of the Line possess the natural advantages of Auckland, the northern capital of New Zealand. Built on the Waitemata harbor, a spacious and beautiful inlet of the Hauraki Gulf, the town boasts of a fleet of yachts and motor launches unrivaled in the Australasian colonies. The harbor abounds in safe, roomy anchorages, where the amateur sailor may leave his ship in perfect safety, while the smooth, sandy beaches which line the foreshore provide ideal winter quarters.

Yachting in Auckland does not owe its popularity alone to the Waitemata: the Hauraki Gulf offers a perfect cruising ground. Bounded on the west, south and east by the mainland, and protected on the north by the Great and Little Barrier Islands, which act as buffers against the long Pacific rollers, this beautiful sheet of water affords almost the qualities of a lake or inland sea. Along its coasts are deep, sheltered coves, where boats of any size may lie snug and safe in all weathers, and the settlers on its shores are ever ready to extend a hearty welcome to visitors.

Nearly every type of boat is represented on the Waitemata. The old-fashioned, straight-stem, counter-stern yacht still retains a few admirers, but, to a great extent, she has given place to the modern deep keeler, carrying a big overhang fore and aft, a type which forms the majority of the larger vessels. The "skimming dish," or patiki, at one time promised to become popular, but, as this craft did not prove suitable for outside work and cruising, she has been superseded by the tuck-stern mullet boat, by far the most popular boat in Auckland.

These mullet boats are a very beamy craft of light draft, and carry a large spread of sail, stability being obtained by a deep plate and inside ballast. They can be easily beached for cleaning, painting and repairs, and, as they can enter the shallowest bay or river, the mullet boat proves the handiest of cruisers. Her initial cost is much less than that of a "keeler," consequently, among the younger boating men, her popularity is ever increasing. Racing among them is keen and exciting, the races always providing large fields and close finishes.

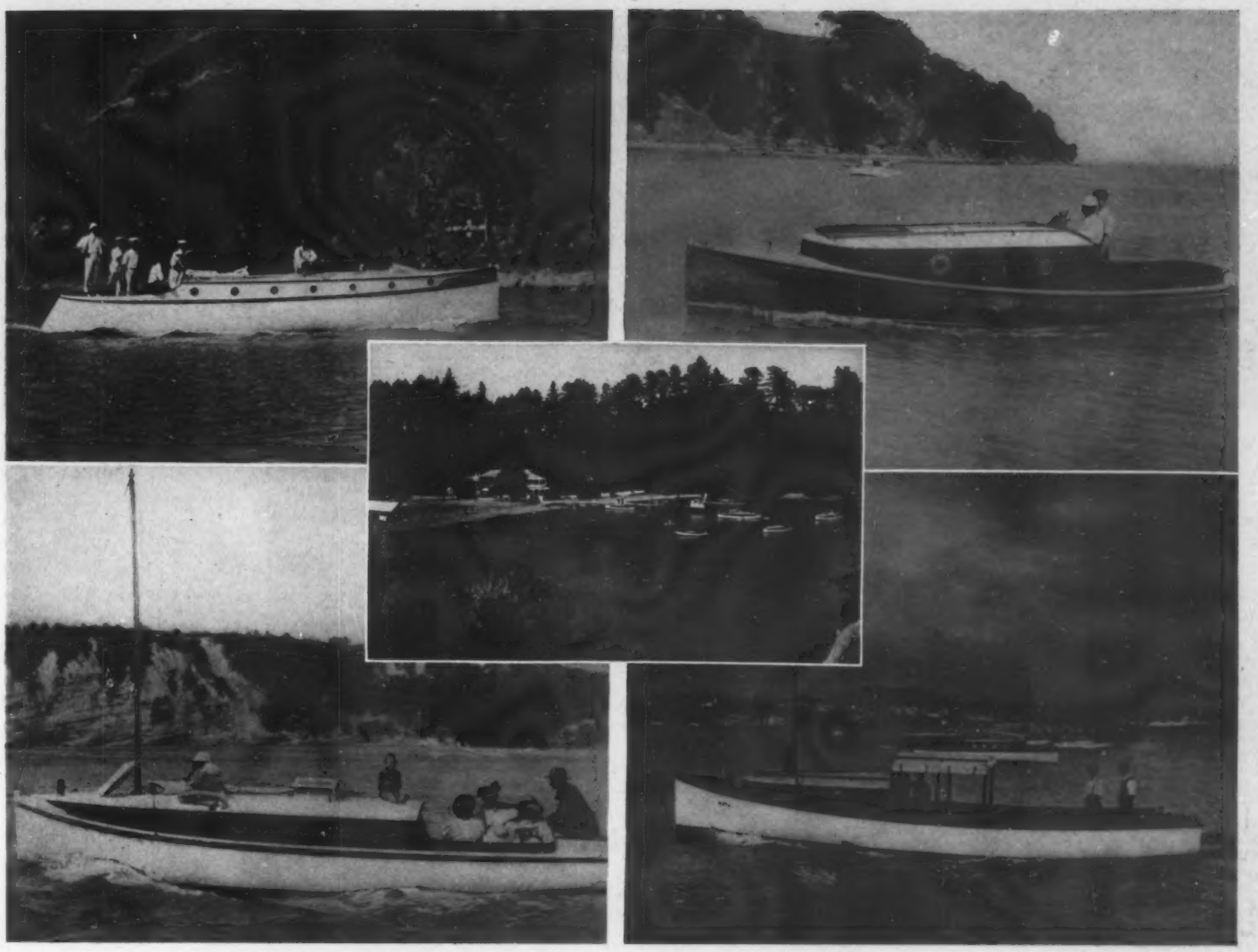
Of late years, however, the demand for motor power has caused a falling off in the building of "windjammers," and many of the latter are now fitted with auxiliary power. Each season witnesses a big addition to the motor fleet, the majority of which are provided with a certain amount of canvas. The speed launch, built purely and simply for racing purposes, has no friends at the Antipodes, owners preferring a comfortable, roomy cruiser.

The stamp of launch most in demand is the tuck-stern, straight-stem boat from 35 to 40 feet in length, and fitted with an engine from 12 to 20 horsepower.

As well as being the headquarters of the Royal New Zealand Yacht Squadron, Auckland supports five junior yacht clubs, in addition to the New Zealand Power Boat Association. The squadron received its warrant to fly the blue ensign in 1902, and is the senior yachting body in Auckland, being founded on the old Auckland Yacht Club, which dates back to the seventies. About 60 of the larger yachts and launches fly the squadron burgee, for

WAITING FOR THE STARTING SIGNAL, AWAROA BAY, NEW ZEALAND

START OF RACE BETWEEN TUCK STERN BOATS IN AUCKLAND HARBOR



POWER CRUISER PIRATE ENTERING AWAROA BAY

ENTRANCE TO ISLINGTON BAY

MANSION HOUSE BAY, A FAVORITE WEEK-END RENDEZVOUS

FAMILY BOATS ARE VERY POPULAR IN NEW ZEALAND FOR WEEK-END CRUISES

POWER BOATS IN WAITEMATA HARBOR

that body does not cater to the smaller boats, whose owners receive more consideration from the other clubs.

The Richmond Cruising club, the Ponsonby Yacht and Motor-Launch Cruising Club (generally known as the Ponsonby Cruising Club), and the Victoria Cruising Club are located on the southern side of the harbor. Each of these clubs has a good-sized fleet, and the Victoria Club has a membership of 400, which shows that boating is as popular south of the Line as north of it.

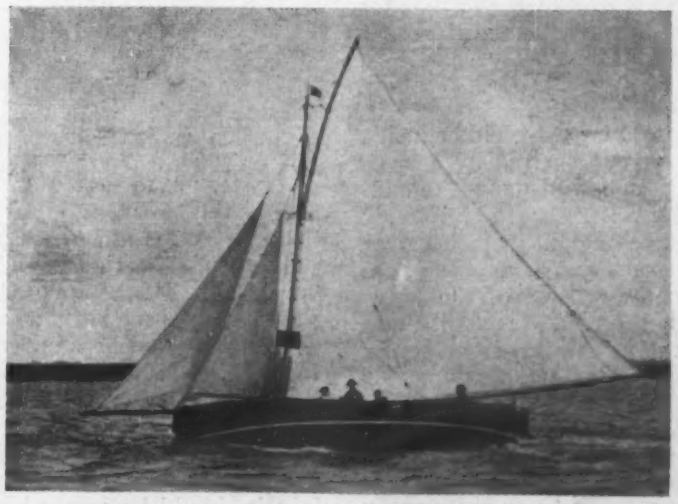
The Devonport Yacht Club and the North Shore Yacht Club are centered at Devonport, the marine suburb on the northern shore of the Waitemata.

Each club holds a series of harbor races during the season, but, as owners and crews are compelled to sacrifice their week-end cruise in order to participate in such contests, this style of racing does not appeal to yachtsmen as much as the cruising races, where the excitement of a race and the pleasures of a cruise are combined. All of the clubs go in strong for these cruising races. The yachts are classified and race in their respective classes to some rendezvous, where they lie sheltered for the night, and then they return home the next day.

These cruising races are usually well filled and provide the best of racing. The entrance fee is nominal, and useful and valuable trophies are awarded to the successful competitors.

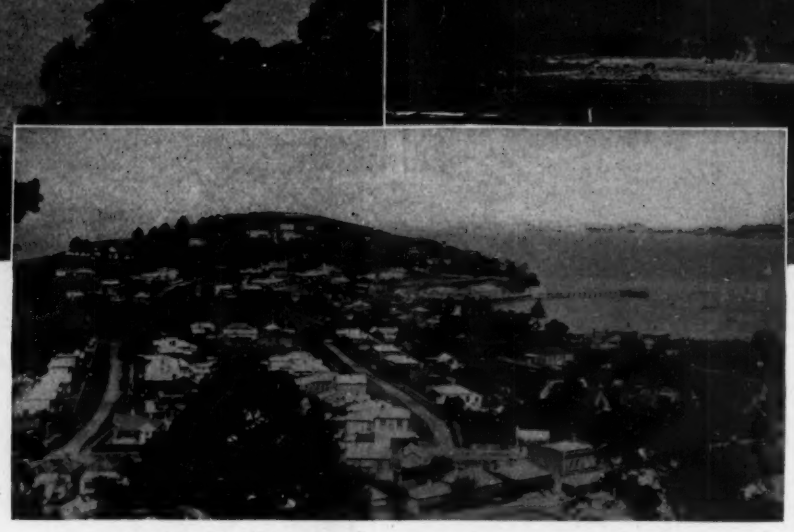
Week-end cruising is the most popular form of yachting in Auckland, and each Saturday afternoon witnesses a general exodus of the mosquito fleet. They begin to cast off their moorings shortly after noon, and for hours pass down the harbor in a seemingly never-ending procession. The different rendezvous along the coast and among the islands outside the harbor offer many attractions and a great choice of destinations, and as many as 50 yachts frequently lie for the night in one bay. A few hours on Sunday morning are devoted to fishing, and all hands return during the late afternoon and evening.

Extended cruising is undertaken during the Christmas and New Year holidays, which is the early summer down here, when business cares and worries are cast aside and a couple or three weeks' cruising is indulged in by those fortunate enough to get away.

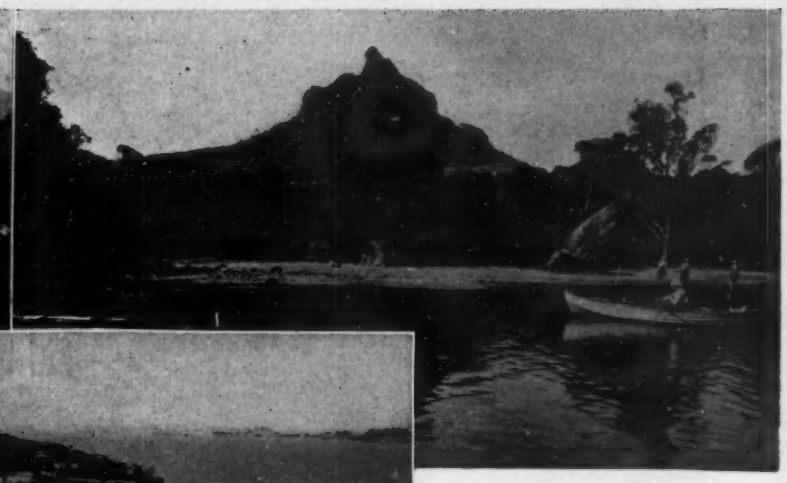


A 26-FOOT TUCK STERN MULLET BOAT; A FAVORITE TYPE IN NORTHERN NEW ZEALAND

BAY WHANGAREI HARBOR, INSIDE THE HEADS



NORTH HEAD AND DEVONPORT, WITH ENTRANCE TO HARBOR



OLD MONAIA, WHANGAREI HEADS

The Gulf itself is over 80 miles in length, and its shores appear to hold an unfailing charm for boatmen. If one wants variety he can enjoy a change of scene each cruise, with the many harbors to be found. No matter from what quarter the wind blows, he can lie safe and easy in some bay.

Waiwera and Kawan, distant about 27 miles from

(*Continued on page* 112)

Emergency Repairs

How to Remedy Common Troubles Pertaining to Gas Engines

By A. L. BRENNAN, JR.

IN most cases when a breakdown in connection with internal-combustion motors occurs it necessitates calling upon a machine shop to remedy the trouble—that is, in the event of a serious breakdown, such as a broken crankshaft or cylinder, etc. But in regard to minor troubles, such as stripped threads, gasket blow outs, and the like, much can be accomplished with the means at hand.

STRIPPED STUD BOLTS

Take a stud bolt, for instance, that has been stripped, the nut in consequence fitting too loosely to do any good (or the same trouble being due to the nut being stripped), the trouble can be effectively remedied, for a short time at least, by placing the nut in a vice and cutting a slit in it with a hack-saw, the two ends of the nut then being squeezed together by using the vice or else employing a hammer. Although a nut that is treated in this manner is considerably weakened, yet it is quite surprsing what a strain it will stand without separating.

LEAKS IN WATER JACKET

Sand holes and other slight leaks in water jacket, either inside cylinder or outside, can, in many cases, be repaired by a rust-forming solution that is composed of one-half pound of sal-ammoniac to each gallon of water. The water should be drained out of engine and this solution allowed to remain in jacket over night. There are several iron cements on the market which are very excellent for filling up cracks on the outside of the water jacket. A cement composed of iron borings, sal-ammoniac and sulphur and fresh water is often times very useful if a regular metal cement cannot be had.

GASKET BLOW OUTS

In case a cylinder head gasket blows out and there is no asbestos mill board or wire gauze cloth on hand, heavy brown paper (or even newspaper) will last for a short time. If there is no paper on hand, it is quite feasible to make use of a thin piece of canvas or other cloth. Care must be taken to clean the contact surfaces of both cylinder and cylinder head off thoroughly, for any high places will result in loss of compression or the blowing out of the gasket. Cylinder oil is the only medium that should be supplied to these emergency gaskets.

Make-and-break igniters are usually fitted with some form of gasket, and, considering the high temperatures that these mechanisms are subjected to, it is not always feasible to use paper for a gasket in case of emergency. Igniters fitted with metal gaskets can be made perfectly gas tight by using wire cloth or paper asbestos, but if neither of these is at hand and ordinary paper cannot stand the heat, the igniter can be slacked back and any copper wire that is handy wrapped around the igniter, thus taking the place of the gasket. A piece of lead pipe can be hammered flat and an igniter gasket easily cut out. Lead melts easily, yet it is surprising how much it will stand.

BROKEN SPRINGS

Broken valve springs can be repaired by placing a washer or nut on the valve stem between the two broken ends. Weak springs can be strengthened by adding washers or by drawing them out.

OVERHEATED BEARINGS

Overheated bearings should be supplied with additional oil; this remedy alone, if the engine is slowed down, will often suffice, but if the bearing is so hot that oil only burns when fed to the bearing, the motor should be stopped, if possible, for the burned oil will clog up the oil holes and only make a bad matter worse. However, much good can be done by pouring large quantities of oil on the bearing.

Bearings invariably heat through lack of efficient lubrication or else from the fact that they are too tight. If a bearing is too tight it should be scraped out a little. Do not try to remedy a tight bearing by slacking back the holding nuts. If they require

slacking, suitable shims made of paper, tin, or sheet brass should be fitted and the bolts set up tight.

WATER-CIRCULATION TROUBLES

If the engine overheats through failure of the cooling system, the check valve should be looked to first, for a small chip of wood or other obstruction renders the check valve inactive. Especially in cases when the engine has become very hot, care must be taken to restore the circulation water only after the temperature of the motor has dropped sufficiently to preclude any danger from cracking the cast iron.

The packing in gland on plunger pumps sometimes gets loose or worn, which not only allows water to leak into boat, but also permits of air being pumped into water jackets, which may induce steam pockets in jackets that are not well designed. To remedy this trouble the packing gland should be screwed down. If this does not correct the fault, new packing should be substituted, but if there is no regular hemp or other stuff on hand, braided string or strips of cloth rubbed with grease will suffice; but set the gland up gradually and do not force it with a large wrench.

WEAK BATTERIES

When running, stopping due to a weak battery sometimes unexpectedly occurs with motors equipped with vibrating jump-spark coils. In many cases the motor can be kept in operation for several hours by removing the spark plugs and reducing the gap between the points, and also by slightly increasing the tension on the tremblers (vibrators) on the coils. However, it should be remembered to readjust the coils after wiring in a new set of cells, for if this is not done their life will be shortened by the additional tension on the vibrators.

In the event of even a serious mishap, look around and consider the means at hand for effecting a remedy, and in the majority of cases you will experience little difficulty in making temporary repairs that will get you to your destination.

Deep Water Voyages with the Sloop Rig

WHILE we do not, as a rule, look with much favor to-day upon the sloop rig as one for cruising on rough water, yawls, schooners and ketches being preferred to the single-stickers, yet the rig has its good points in small vessels, even for outside work, though naturally by dividing up the sail area greater handiness and all around balance may be obtained.

In the light of the trip of Amundsen in the 65-foot sloop Gjoa only a few years ago, through the Northwest passage from the Atlantic to the Pacific, the first of all vessels to accomplish what has been the goal of nearly four centuries of effort, it is interesting, perhaps, to look back at the records of earlier days and see what the sloop, a representative American craft, has done in the way of deep-water voyages.

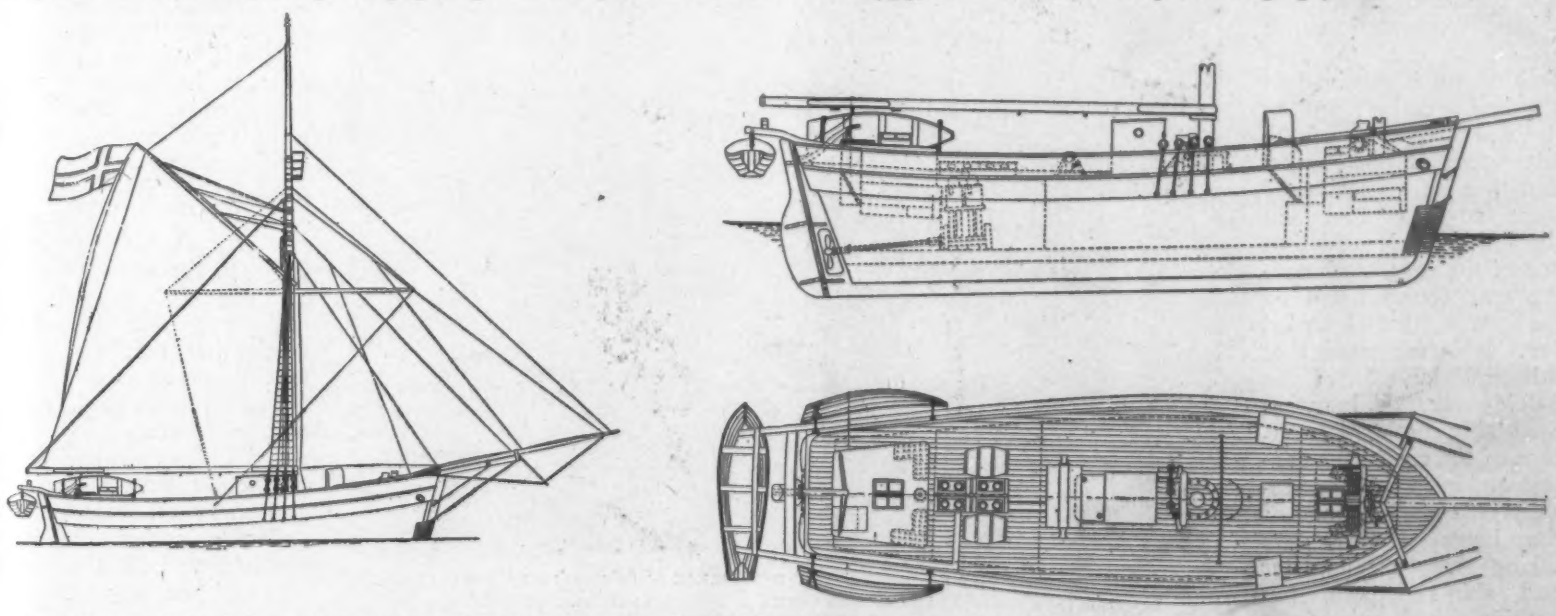
Long before yacht racing was thought of as a sport, the American sloop was famous. In 1783 a sloop of only 40 tons sailed from Boston, bound on a voyage to Canton, laden with a cargo of American ginseng root, then, as now, highly esteemed by the Chinese as a medicine. Touching at the Cape of Good Hope for provisions, her Commander, Captain Hallett, found a number of English ships homeward bound from Canton. The English captains, fearing the entering wedge of American rivalry in this enterprise—for this was the first American vessel to engage in the trade—bought out Captain Hallett's cargo of ginseng, giving him two pounds of fine tea for each pound of the root. This made it quite profitable for the Bostonian. But the little scheme by no means prevented our countrymen from seeking commerce in the Orient.

Captain Stewart Dennis, of Albany, sailed on December 15, 1785, in his 84-ton sloop Experiment, with a crew of seven men and two boys, bound to Canton. He returned with a cargo of tea, having made a good speculation of it. He could scarcely persuade the Chinese that he had made the long passage of 15,000 miles in such a cockleshell, and for years after he lived in the memory of the Canton merchants as the "one-mast captain."

In the early eighteenth century sloops were of sufficient size and seaworthiness to cross the Atlantic with loads of lumber from the American colonies to Great Britain, and Captain Clark, in his book, tells of the voyage of the 98-ton sloop Union, which sailed from Newport, R. I., in August, 1894, and, after an eventful voyage of 22½ months, returned home, after having circumnavigated the world. She proved herself an excellent sea boat, and is believed to be the first sloop that ever sailed around the world. She is said to have averaged 130 miles a day—an excellent record for a sailing vessel.

In September, 1787, the sloop Lady Washington, of 90 tons, Captain Robert Gay, sailed from Boston on a voyage round Cape Horn for the Pacific Coast, returning with a cargo of furs from the Northwest. A medal was struck to commemorate this daring voyage, and one of them is still in existence in the State Department at Washington.

In 1793, there were 90 sloops, averaging 90 tons each, in the



THE 70-TON SLOOP GJOA, IN WHICH AMUNDSEN MADE THE NORTHWEST PASSAGE. SHE WAS EQUIPPED WITH INTERNAL COMBUSTION AUXILIARY ENGINE

passenger and freight trade between New York and Albany, the quickest passage on record at that time being sixteen hours from pier to pier, the distance being 150 miles—a capital bit of sailing.

From the years preceding the American Revolution down past the war of 1812 there was a large fleet of sloops trading from New York and New England ports to the West Indies and Spanish Main, and a number of small privateers of that rig were fitted out during the last-mentioned little unpleasantness, and earned money for their owners and crews by preying on British shipping of the provinces.

These few examples quoted may not be amiss when read by those who are accustomed to deride a vessel that has played a great part in the early history and development of this country, and who claim to see no good in the rig.

More About the Marie Celeste

IN the last issue of YACHTING was an article on the mysterious case of the brig Marie Celeste, which was picked up abandoned without apparent cause, and in good condition, in December, 1872, nothing having been heard since of her crew. This article was devoted principally to discrediting the story of an alleged survivor of the brig which appeared recently in the Strand Magazine.

There have been printed in the past many other stories of "survivors" of the ill-fated vessel, which have ranged all the way from piracy and murder to barratry, and have been given more or less credence, but which have mostly been accounted fakes by those familiar with the circumstances of the finding of the vessel. All the elements of a sensational story were in this case, and it is not strange that much of this sort of stuff has been written.

In the story in last month's YACHTING the author made a suggestion himself as to what might have happened, supposing that a crime had been committed, that, while possible in view of the unusual circumstances surrounding the case, was not convincing. Since then an account has appeared, emanating from the office of the New York agents of the vessel, J. H. Winchester & Co., giving Mr. Winchester's opinion of the case. As he went to Gibraltar and saw the brig after she was taken there by the bark that picked her up, he can speak with a certain amount of authority, and his opinion is the most plausible yet advanced, though there are some points in connection with the condition on the vessel that are hard to reconcile with it.

His theory is that the cargo of the brig, which was composed of oil and spirits, generated vapor and gas, due to the shaking up it received in the bad weather, and to the warm weather of the latter part of the voyage, and that an explosion of these gases occurred in the hold. It is said that one of the fore hatch covers was found lifted by the party that boarded her. It is supposed that this explosion blew off the hatch cover, and, knowing the highly combustible nature of the cargo, the captain and crew left the vessel precipitously in one of the boats, the captain taking his chronometer and ship's papers, but nothing else. Rowing some little distance from the brig the crew waited for another expected explosion, and when it did not come and there was apparently no fire, they started to return to the vessel, only to find that with all her sails set she sailed faster before the wind than they could row, and finally sailed away from them. Left alone, the crew of the small boat were not picked up, and eventually perished, though the brig evidently was boarded shortly afterwards.

This theory is, of course, very plausible, and probably Captain Winchester had some first-hand facts that were not given in the official reports. For instance, the official reports did not say anything about the fore hatch cover being off. There was no sign of an explosion or fire below, and the reports also conflict as to whether or not a boat was missing, some saying that all boats were in place, and others that one was missing.

Official reports also state that the last entry in the log book was November 24, whereas the brig was not picked up until December 5, evidently a very short time after she was abandoned, as the state of the cabin table, and the things on it and on the sewing machine of the Captain's wife, would indicate. There must have been something wrong if the log book had not been written up for ten days. This is most unusual, even in small vessels, and, taken alone, might point more to a crime than to the theory just offered. Also it would take some little time, say from five to ten minutes, to get a boat overboard, especially if it was carried on deck, or on top of the forward house, as was usually the case, and get all the crew into it. In that time, if there was only one explosion and no fire appeared, the crew would have had a chance to recover from any hasty panic and the captain would have been very slow about leaving his ship without a further investigation of the trouble; and after the freeing of the pent-up gases by the first explosion, unless there was fire, there would probably be no other explosion.

All these things need explanation. As a rule, vessels of that size usually carried but one boat, though occasionally they carried two, the second one being a small boat for the captain's use in harbor only, and would not have been used in abandoning ship.

YACHTING has taken pains to get in touch with the relatives of Captain Briggs of the Mary Celeste, which, by the way, was the vessel's name, and not Marie Celeste, as she is commonly called, as to clearing up the point of how many boats the vessel carried, whether any were missing when she was found, and such other facts as might throw light on the subject, and will publish these in a later issue.

It may be interesting to know that the Mary Celeste had a very adventurous career subsequently. After being turned over to her owners she was put back in the West India trade until she was finally wrecked on the coast of Hayti, where, after collecting insurance on "general merchandise" cargo to the sum of $30,000, the captain sold the entire cargo for $500. Investigation disclosed the fact that her cargo was not as represented, and that conspiracy to defraud had evidently been planned, the vessel being cast away on purpose in order to collect the insurance on both the vessel and on a spurious cargo.

THE EVERLASTING DINGHY PROBLEM. THEY EXPERIENCE IT IN RUSSIA AS WELL AS ELSEWHERE, AS THIS DRAWING FROM THE RUSSIAN YACHTING MAGAZINE, THE RULEVOY, TESTIFIES

A Boat for All-the-Year-Round Use

By DAVID BUFFUM

WITH the coming of the first cold weather of the autumn, those to take to the water for pleasure usually scurry for some sheltered basin, there to "lay up," and go hunting a warm corner by the club-house stove. They don't see much fun in going boating when ice is making. Nevertheless, with that highly essential thing, *a boat of the right kind*, the yachting season can be greatly prolonged and its pleasures made to continue at least through all of the autumn months—a lengthening which those who are true lovers of the sport, and who have learned how to get all of the best there is in it, cannot fail to appreciate. Personally, I have for many years regarded October as the pleasantest month of the whole year for cruising. There is then an exhilaration, a certain indefinable spirit of the joy of living, that is lacking in the warmer season; and at night, in a snug harbor, there is a coziness and a sense of comfort in the lighted cabin and the hot supper that to a true sailor makes a specially eloquent appeal.

GOROO, A "GLORIFIED FISHERMAN," BUILT FOR AN ALL-THE-YEAR-ROUND BOAT

It is not my present purpose, however, to exploit the joys of cold-weather yachting, but to point out the kind of craft that, in my opinion, is essential for it. In this matter I feel that I can speak with some degree of authority, for I live on an island where we have in winter only a weekly steamboat service to the mainland, and where, in consequence, we are obliged to keep our power boat in commission the year round. Five miles of deep, and often very rough, water lie between us and our nearest town on the mainland. And here is something that the average summer yachtsman does not know; the sea in winter is much rougher than in summer, for the simple reason that the wind, even if moving at no greater velocity, is more powerful or has more weight to it. I have known novices to doubt this; but it is a phenomenon that is due to one of the simplest of natural laws, and a very little winter experience on the water will convince the most skeptical.

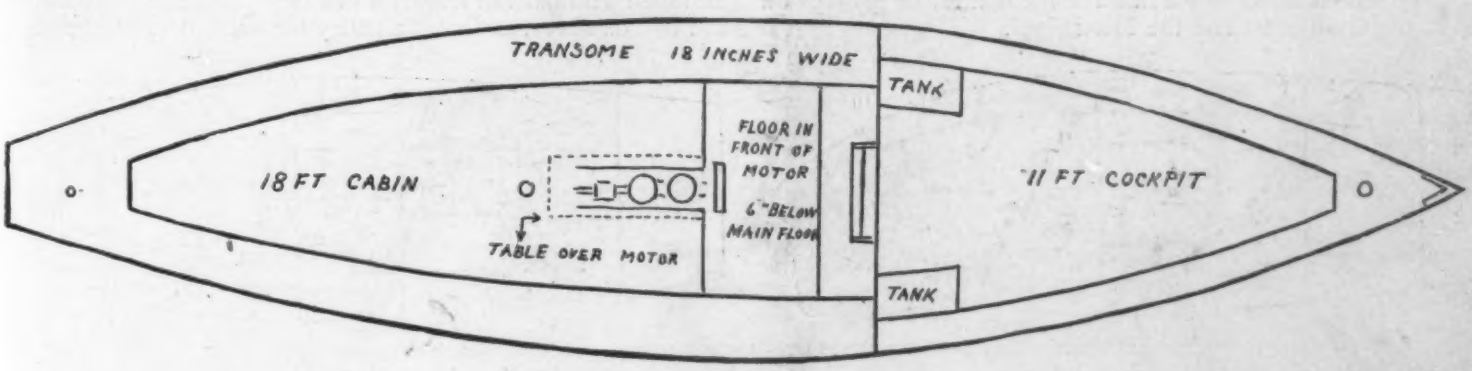
There are three things that should have important consideration in a boat for all-the-year-round service: First, she should be a first-class sea boat, able to face any stress of weather; second, she should have a large, comfortable cabin and a closed-in pilot house, so that she can be handled mainly from in-doors; and, third, that she be so arranged that she can be handled with the least amount of work and without danger of slipping overboard when the flying spray has coated her with ice—a very frequent occurrence in winter.

Let us first consider the quality of ableness. Leaving out of our reckoning the deep-keel and outside-ballasted boat—an able type, but not well adapted to power, and power is essential in a boat for all-year service—there are certain features in model that must always be observed if a boat is to be able. She should have a certain amount of fullness and flatness amidships in order to give her bearing and stability. She should have good sheer and some rake or outward curve to stem and stern, and flaring sides, so that when struck by a sea from whatever direction she will rise to it easily and go *over* it, instead of wallowing *through* it. Splendid examples of these features are found in the whale boat and the mackerel seine boat, but the dory possesses them in the highest degree of all. Look carefully at a dory and see what a wave-climber she must, of necessity, be. She "flares" in every direction.

For many years dories were built only of row-boat size. But the substitution of power for sail in fishing boats necessitated a new type. The power fishing boats were, as a rule, much smaller than their sail-propelled predecessors, and fishermen found the types in the market both inconvenient and unsafe. Thus a demand sprang up for a more seaworthy power boat for commercial use, and the power dory was the result.

Except for the small dories seen all along our coast, the power dory is to be found mainly "down East"—that is, east of Boston. It is a very considerable modification of the dory proper, having steamed and bent ribs like an ordinary keel vessel, and a hull whose curves and general contour are exceedingly graceful; but it still has the flat bottom and all the essential characteristics of the true dory.

There seems to be a very common impression among yachtsmen that power dories are always small—due, doubtless, to the name and to the little ones so commonly seen. But this is not so. Who-



ever will take the trouble to visit old T-wharf slip in Boston will sometimes see a hundred of these boats that have come in with fish. They range in size all the way from 25 to 45 feet in length, and the larger sizes predominate. As a rule, they have, as far aft as possible, a small and low cabin, which contains the engine, and affords protection when steering. The rest of the boat is either open or (as in the case of most of the larger ones) decked over and provided with several hatches. They are fast in their class, and their skippers will tell you that they can go through any kind of weather. Most of them are clinker-built (that is, lap-straked), and have no calking; but some are smooth-planked and calked. The ribs, which are steamed and bent, are fastened to the top of the flat bottom, extending alternately clear across it, which makes a strong method of construction. The cost of building does not vary much from that of the ordinary keel boat, but is slightly less.

After having used boats of various types, my sons and I decided to have a boat built that should be especially adapted to our needs as an all-the-year-round craft, and, having seen these large fishing dories, determined that she should be of this type, though arranged somewhat differently, to better serve our purposes. As we need plenty of cabin room and rarely carry over a ton of freight, we, therefore, had a much larger cabin and less freight room than I have seen on any fisherman.

The boat is 35 feet long, with 8 feet beam, and clinker built, like most of the fishing vessels. She has a 15-horsepower engine. Her cabin, which is placed aft, as in the fishermen, is 18 feet long and at its forward end has a pilot house, with all four sides of glass, so that one can see in all directions. Wide transoms run around the sides of the cabin and extend under the after deck, thus giving ample sleeping room for six men. The cockpit is forward, and is of the kind sometimes called "self-bailing"—that is, water tight, with its floor above the water line, and provided with scuppers. We put the cockpit forward and the cabin aft of it, because, for almost all practical purposes, this arrangement is handier and better. This may not be so immediately apparent to those who use the water solely for pleasure and only during the summer months; but if you want an illustration, try going forward in winter over the ice-covered roof of a cabin to let go or weigh anchor in rough water, and then judge whether you would not prefer to have the cockpit forward. Being ceiled, no water that might come aboard can get below.

She was given a small rig, with two masts, rather short, and carrying leg-of-mutton sails. These, for short runs, we seldom use; but on long runs, with a favorable wind, they save gasolene, while the boat can be handled under them alone in case of any breakdown of the engine.

To make her handle when under sail she has a narrow keel, though this is not as deep as if she were intended for sail power only. She draws only about 2 feet 9 inches of water.

Under her floor she carries considerable ballast in the shape of small stones. These we prefer to either iron or lead, as they are cleaner than the former and "livelier" than the latter.

In cold weather her cabin is heated by an oil heater, a small sliding window forward and another aft, which are kept a crack open, keeping the air pure. But, unless the cold is pretty sharp, her engine furnishes sufficient heat. A coal heating stove such as they make for yacht use could be installed if desired.

Now as to her sailing qualities. Since we have had her we have run her in all kinds of weather, and she has never yet put her nose under water. She is emphatically a quick and dry boat, a wave-climber in the truest sense of the word. For speed she shows, over a measured course, and under power alone, a little better than nine miles an hour; with a good breeze, and under both sail and power, a little better than twelve. With less ballast she would go somewhat faster, but for steadiness in the heavy weather she has frequently to go through the ballast is essential.

In southern New England, where we live, the Goroo (for such is the name of our craft) is a novelty and always attracts attention. As a rule she is much admired. Though modeled, with modification, after a fishing type, some attention has been paid to her appearance and finish, and she has been called—what, in fact, she really is—"a glorified fisherman." For the purpose for which she was designed she has proved an entire success.

As I have stated, it is not my intention, in giving this description, to try to popularize winter boating, but simply to give some hints that may be of service to any who, like ourselves, find it necessary to use the water in cold weather. As pointed out, the comfort and satisfaction of such boating depend entirely on the kind of boat.

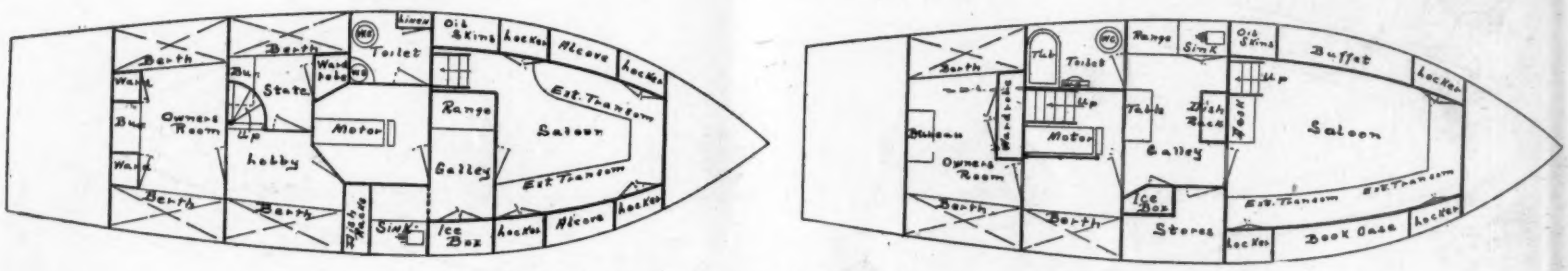
I may add, in conclusion, that, as I write this, the middle of December, we are just about to take a run to Newport, R. I., and I think that if any of my readers were with us on the trip, both *en route* and when, on arrival, we sit down to supper in the cabin, they would agree with me that cruising, even in wintry weather, is not without its pleasant side.

A 45-Foot Floating Home

By GERALD T. WHITE

THOSE who have read my article in the December issue of YACHTING on the subject of houseboating will remember that the boats I described there had no motors installed. Many men would like to live on board a houseboat during the spring, summer and part of the autumn, but they also want to be able to cruise when the spirit moves them. Many of them even want to take their boats to Florida for the winter, or perhaps on a trip to the Gulf Coast and the Mississippi.

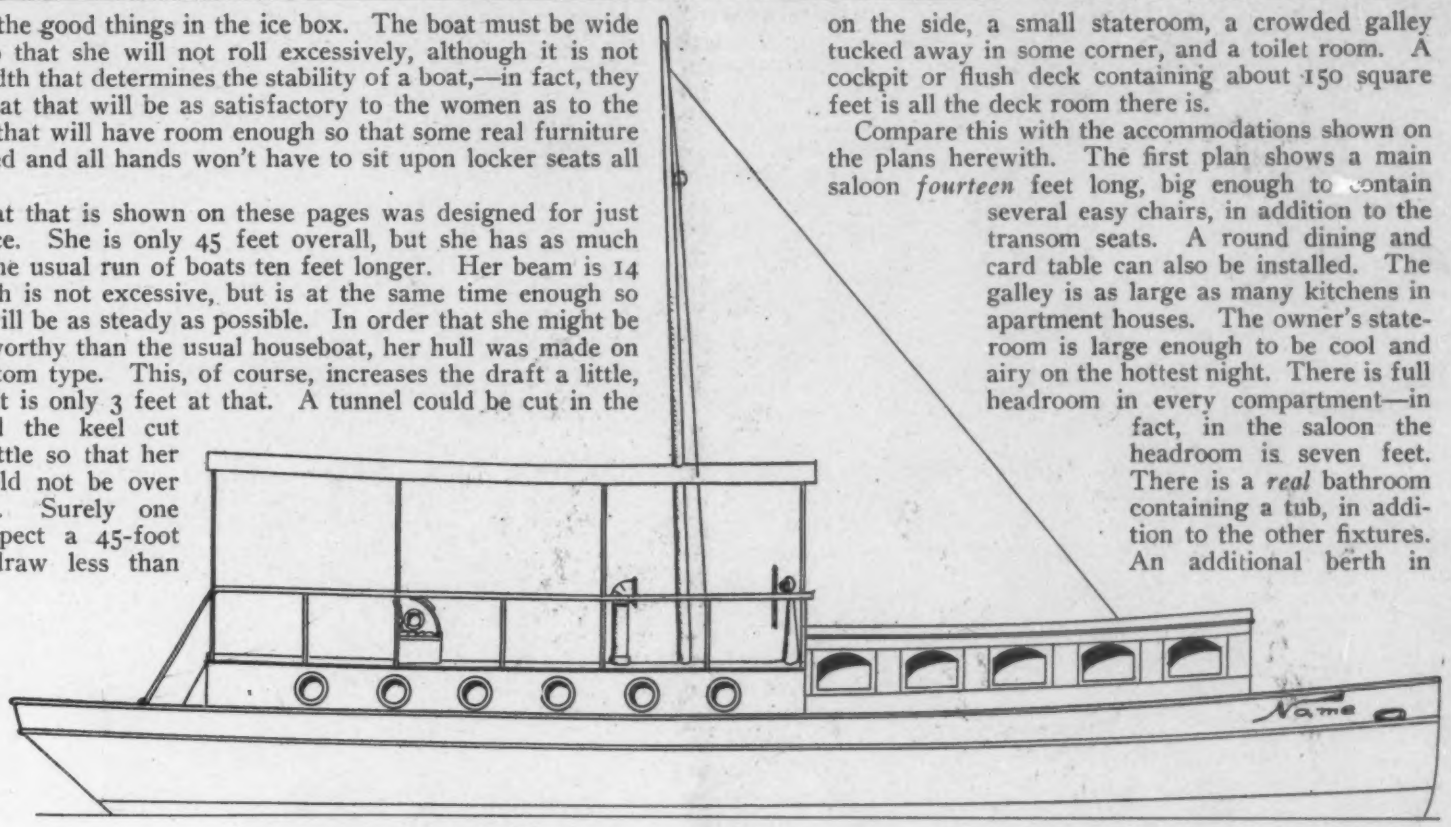
To these men the average houseboat of the motor type, with its flat bottom and comparatively low freeboard, does not appeal. They want a boat that will be seaworthy enough to take short runs outside when necessary, but at the same time they wish a boat with large living quarters, plenty of deck space, real berths with springs and other "fixin's"—in fact, a boat upon which they and their families can live with practically the same comforts that are had on shore, and with a galley big enough to let the cook do



TWO CABIN ARRANGEMENTS FOR 45-FOOT POWER HOUSEBOAT CRUISER

justice to the good things in the ice box. The boat must be wide enough so that she will not roll excessively, although it is not always width that determines the stability of a boat,—in fact, they want a boat that will be as satisfactory to the women as to the men, and that will have room enough so that some real furniture can be used and all hands won't have to sit upon locker seats all the time.

The boat that is shown on these pages was designed for just this service. She is only 45 feet overall, but she has as much room as the usual run of boats ten feet longer. Her beam is 14 feet, which is not excessive, but is at the same time enough so that she will be as steady as possible. In order that she might be more seaworthy than the usual houseboat, her hull was made on the V-bottom type. This, of course, increases the draft a little, although it is only 3 feet at that. A tunnel could be cut in the stern, and the keel cut down a little so that her draft would not be over 30 inches. Surely one cannot expect a 45-foot boat to draw less than this.



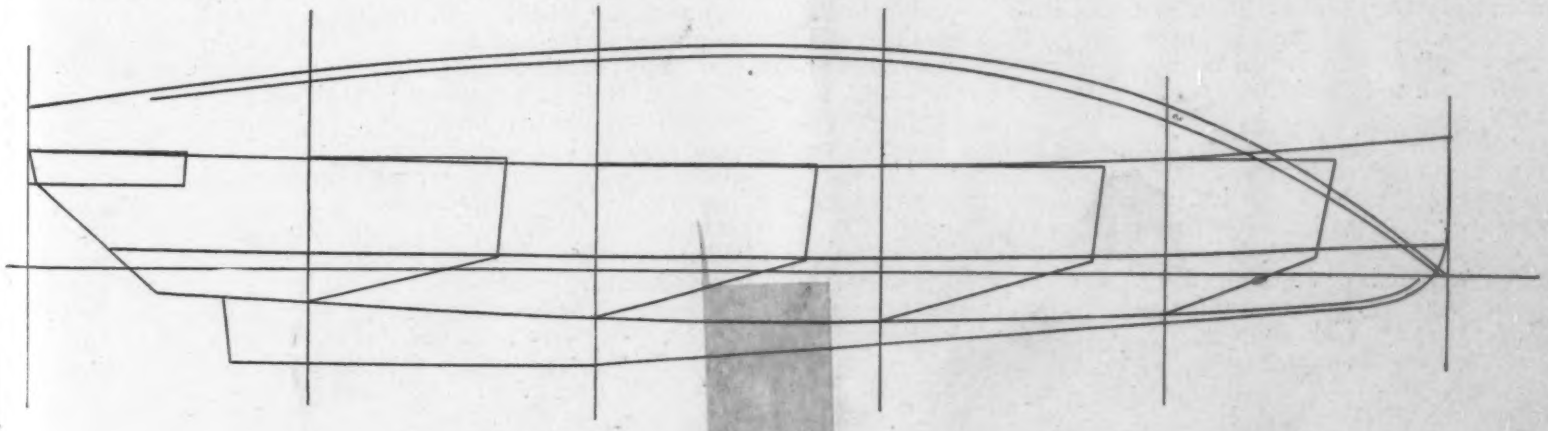
With a boat like this, one would feel that he could like to make an extended trip, if he cared to, in perfect safety. I do not mean by this that she is as seaworthy as any 45-footer can be made, but she will stand seas that would put her flat-bottomed contemporaries out of the running in short order. No matter how staunchly a flat bottom boat is built, the terrible pounding that she gets in a seaway weakens her and finally causes the caulking cotton to work through, making a bad, and sometimes a dangerous leak. Another defect found in flat-bottomed boats is that they cannot be handled in a strong wind. They do not seem to have enough hold upon the water to prevent their being blown to leeward. This fault makes them a rather dangerous proposition, as they are liable to get off into the trough of the sea, with disastrous consequences.

Flat-bottomed houseboats are, of course, very satisfactory for certain uses. There is really no sense in building a houseboat with either a round or V-bottom if the boat is to be kept on some lake or river where open boats can be used in any weather. Of course the ideal proposition for the man who likes to take outside trips is a staunch cruiser of the raised deck type, such as make the Bermuda trip year after year in perfect safety. These boats, however, are hardly comfortable or roomy enough to use for months at a time as a home. You will find that the average boat of that length contains a small saloon with transom berths on the side, a small stateroom, a crowded galley tucked away in some corner, and a toilet room. A cockpit or flush deck containing about 150 square feet is all the deck room there is.

Compare this with the accommodations shown on the plans herewith. The first plan shows a main saloon *fourteen* feet long, big enough to contain several easy chairs, in addition to the transom seats. A round dining and card table can also be installed. The galley is as large as many kitchens in apartment houses. The owner's stateroom is large enough to be cool and airy on the hottest night. There is full headroom in every compartment—in fact, in the saloon the headroom is seven feet. There is a *real* bathroom containing a tub, in addition to the other fixtures. An additional berth in the engine room provides room for a hired man or an unexpected guest, although the transoms in the saloon can be extended to form two extra berths. If more sleeping accommodations are needed there could be another berth placed above the one in the engine room giving maximum sleeping quarters for six people.

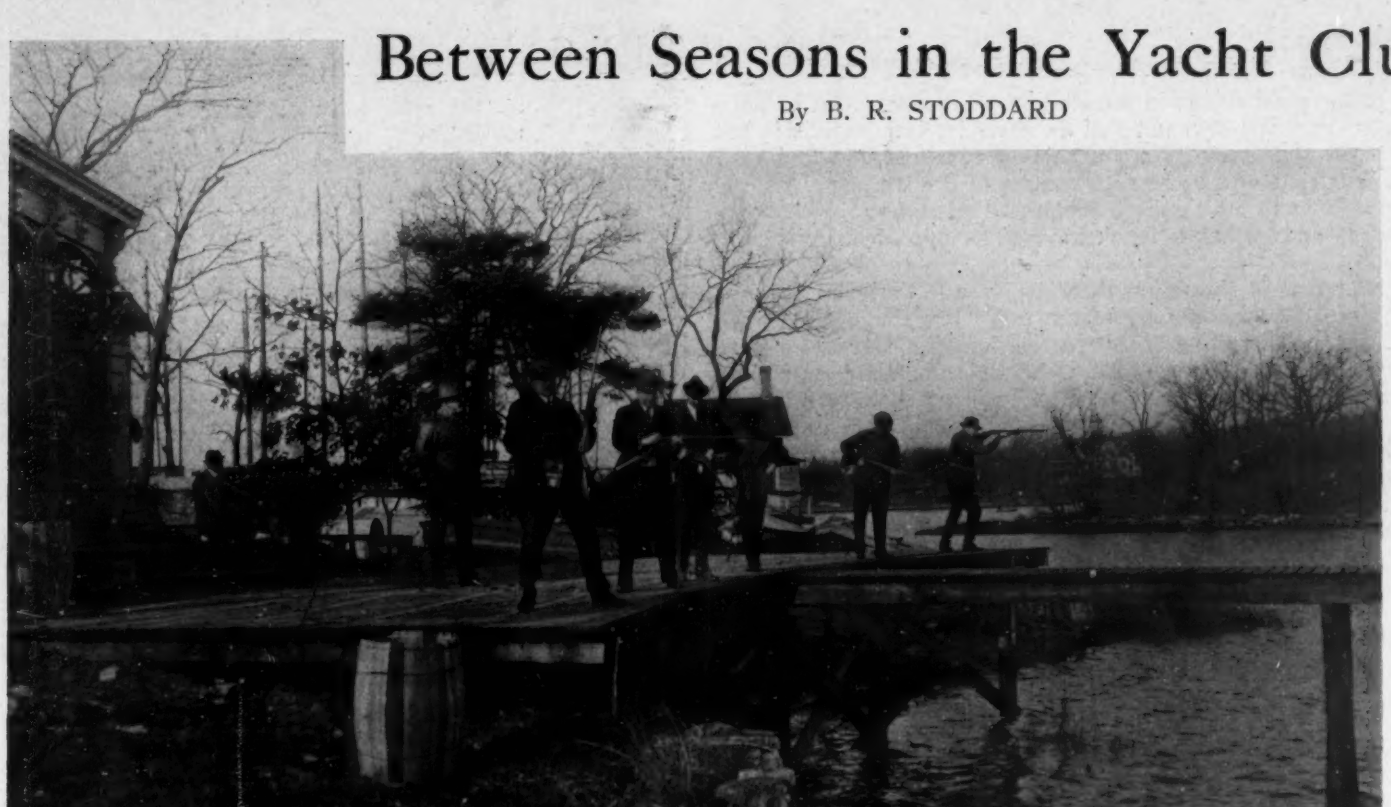
The engine is installed so that there is plenty of room around it on three sides, and as the steps are made so that they can be easily swung up out of the way, the fourth side of the engine can be made accessible. The locker space is ample, and on deck there is close to 300 square feet of deck room in addition to the short decks forward and aft.

The second plan is somewhat different, inasmuch as there is an extra guest's stateroom. As shown, there are berths for four, extension transoms for two more, and by putting in upper berths in the guest room and the lobby eight people could be accommodated with comfort. The saloon is somewhat shorter in this plan, and the galley is a little smaller, although both are as large, if not larger, than the corresponding compartments on regular cruisers. The headroom is the same in both these plans. The engine room layout in the second plan is especially good, as the machine has a compartment all to itself and directly above it is the steering wheel, so that one-man control is possible. Of course the other plan could also have one-man control by using rods and levers. A suitable engine would be one of about 20 H. P., 2 to 4 cylinders.



Between Seasons in the Yacht Clubs

By B. R. STODDARD



WITH THE YACHTS LAID UP UNDER THEIR WINTER COVERS BACK OF THE CLUB HOUSE, A TRAP SHOOTING PLATFORM STILL ASSURES A GOOD ATTENDANCE AT THE CLUB SATURDAYS AND HOLIDAYS THROUGHOUT THE COLD WEATHER

How the Taking Up of Trap Shooting by the Members Not Only Provides Ideal Winter Sport, But Strengthens the Club by Keeping Up Interest the Year Round and Bringing in New Members

IN northern latitudes yachting is essentially a summer sport. When the weather becomes bleak cruising and racing cease to be popular, and even in warmer climates there are rainy seasons and other deterrents to boating as an all-year-round recreation. Even if this were not so, a let-up for a few months each year is a good thing in yachting as in any other pastime, to prevent one from becoming sated with too much of one thing.

For these reasons yacht clubs are commonly confronted with a dull season when interest and financial support both wane. Generally this entails problems such as how to retain satisfactory club servants over the dull season, and ways and means of entertainment for members pending the advent of the next season. As it is now, most yacht clubs are closed for the better part of the year, the active boating season being only some four or, at the most, five months; and not only do the club members not make use of the club privileges, but often expensive property is tied up inactive.

A very satisfactory solution for keeping going all the year round has been found to be clay target shooting "between seasons," and such yacht clubs in the East as the Larchmont, New Rochelle, Stamford, Indian Harbor, Manhasset Bay, Bayside, and the Marine and Field Club near New York, the Maryland Yacht Club and many of those on Massachusetts Bay are finding not only enjoyment in the shooting, but greatly increased club interest throughout the whole year.

Most yacht clubs are particularly well adapted for trap shooting, and their situation lends itself admirably to the purpose. Traps can be arranged so as to shoot out over the water without danger of anyone getting in the way, and usually the property is isolated just enough to prevent the shooting being an annoyance to neighbors. Besides which, the regular club house, or at least part of it, is always available for warming up in cold weather.

The requisites for trap shooting are an outfit for throwing the targets, which can be rented for $15 per annum, a trap house and platform costing from $25 upwards, according to the lay of the land and the willingness to spend money, and a member of the yacht club who is energetic enough to organize the shooters, hire the trap pullers and trap feeders, arrange contests, etc. The total cost to those participating can be kept within three cents per shot, and as many will not usually shoot more than fifty rounds on a Saturday, Sunday or holiday, the expense of trap shooting compares favorably with the cost of yachting.

Any good 12-gauge gun with a full choke barrel will do fair work, but a straight stock, single-barrel gun specially designed for trap work is more popular and effective and can be bought for $20 to $30, or as much more as one cares to pay. The various powder and arms companies will supply their experts free of charge to guide the construction of the plant, the coaching of novices, and to arrange for competitions. In fact, these experts are glad to take full charge of affairs until the sport has been established sufficiently to keep itself going properly. Also the ammunition companies will frequently offer prizes to encourage the growth of the sport.

In trap shooting the participants find a healthy open air competition that tests and develops their skill with hand and eye, and carries a pleasant thrill. Many members who do not care to shoot come to look on. It keeps "something doing" at the club all the time to attract those who would never think of coming around otherwise. Afterwards the members meet in the club house for refreshments and a chat. Perhaps the club house may be kept open and meals served on shooting days, followed by a game of cards. So that what used to be a dreary time of waiting now passes quickly and joyfully, and one almost feels a twinge of regret (even the hardened shellback) when the new yachting season finally displaces the whirling target, the "bang" and then the "puff" of the "dead bird."

YACHT CLUBS ARE USUALLY SO SITUATED AS TO MAKE IDEAL SHOOTING CONDITIONS POSSIBLE

TRAP SHOOTING PLATFORM AND WINTER CLUB HOUSE OF THE NEW ROCHELLE YACHT CLUB

Some yachtsmen who have never faced the traps may be diffident because of a fear of making a poor showing. They need not feel this way; for while there are some splendid shooters among the amateurs, the majority lack experience, and perhaps adaptability, and many of them come out day after day and make poor scores. Yet they enjoy themselves just as much as "crack" shots. Few, indeed, are the shoots where some novice does not appear who, perhaps, only breaks a bird or two out of a string of twenty-five. Nobody laughs at him, because all understand how easy they are to miss. However, the beginner usually "gets the idea" after a few trials, and, with his handicap allowance, before long finds himself a prize winner.

It is only during the past year that trap shooting as an alternative to yachting in winter has achieved full popularity, but such progress in this direction has been made in the East that arrangements are now under way for a regular programme of inter-yacht club shoots for an annual team championship; and the 1914 Sportsman's Show, to be held at Madison Square Garden in March, offers a special prize to the winning yacht club team of five men.

As a concrete example of how the combination of trap shooting and yachting has been successfully worked out in an individual club, the experience of the New Rochelle Yacht Club is interesting.

Five years ago four of the members of this club erected a crude outfit for shooting clay pigeons during the fall and winter months. Others joined in from time to time, and visitors came to look on. Each fall, at the resumption of shooting, there were more gunners and more spectators.

In the course of time the contests were held at a fixed hour on Saturday afternoons, Sunday and holiday mornings, and interest gradually grew until last autumn a plan was adopted providing, as a means of membership for gunners who were not yachtsmen, a nominal associate membership fee to cover the period from November 1 to May 1. This membership carried with it the further proviso that any such associate member might become a full-fledged member in the spring by paying the balance of dues and initiation fee.

This has resulted in a number of gunners joining the club, and after becoming acquainted several have already elected to qualify

ALL THE REQUISITES FOR A PLEASANT WINTER DAY OUT OF DOORS

for full membership and take up active yachting next spring.

Interest has finally grown to such proportions that two traps and platforms have been established, capable of taking care of 50 gunners. About 25 of the members of the New Rochelle Yacht Club are actively participating. On Saturday afternoons from 1,000 to 3,000 targets are trapped and on Sundays and holidays from 1,500 to 4,000.

The Gun Division of the yacht club is fully self-supporting, providing for its own prizes and the cost of the trapping outfit. Inter-club shoots are being held and visitors from other clubs are frequent; and whereas, previous to the trap shooting, half a dozen members might have visited the club on a Saturday and Sunday, now there is invariably an attendance of from 30 to 50 on these days.

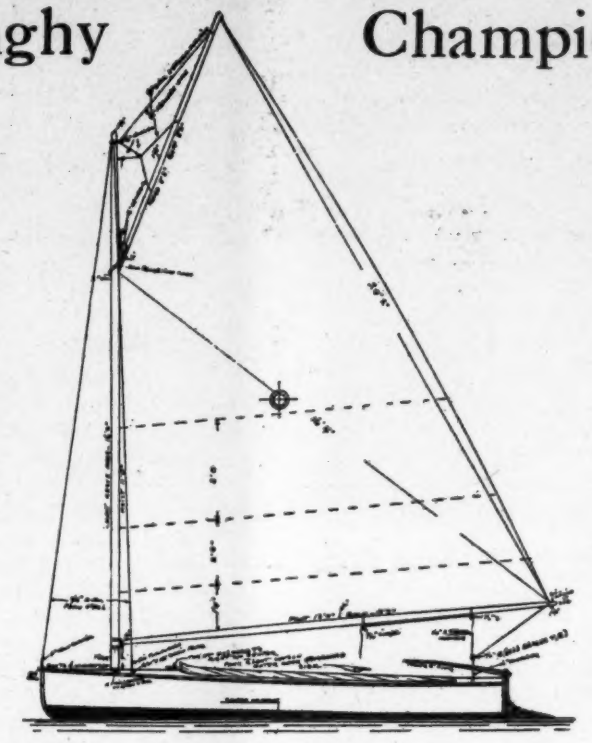
Vampire III, Inter-Lake Yacht Racing Association Dinghy Champion

THE sailing dinghy class of the Maumee River Yacht Club at Toledo had a very active season last year, and sailed some fine races.

We reproduce herewith the plans of Vampire III, from the board of John A. Connolly, Jr., winner of the 14-foot Dinghy Championship of the Inter-Lake Yacht Racing Association.

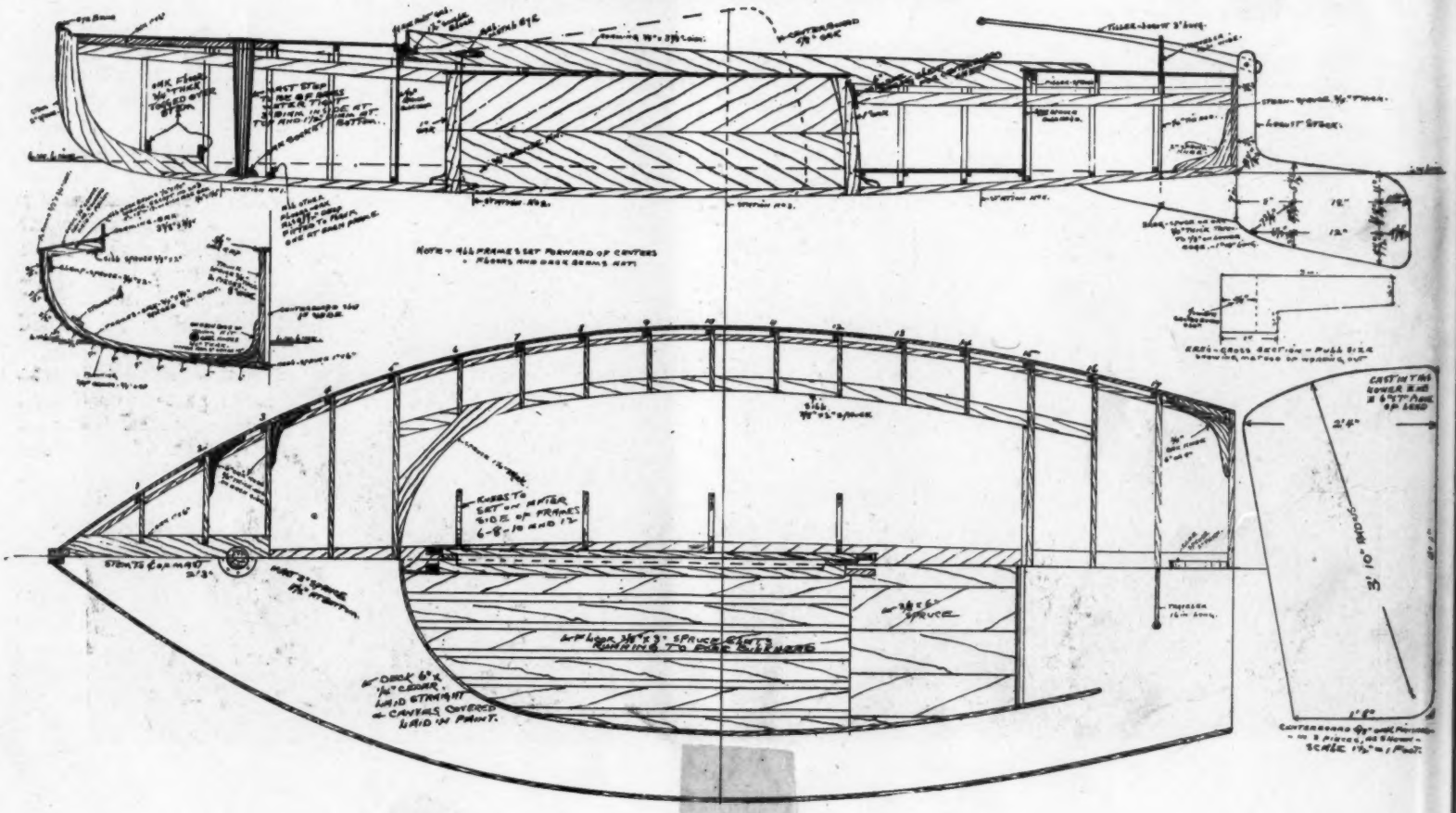
This craft is 14 feet long over all, 5 feet 2½ inches beam, and spreads 139 square feet of sail, the limit of the class being 140 square feet, all of it having to be in one sail, which, consequently, makes them a fine, small, safe racing catboat.

Mr. T. E. Waters, chairman of the "Dink" committee of the Maumee River Yacht Club, in commenting on this craft, wrote the designer, Mr. Connolly, as follows:



"The first boat built from your design—the Vampire III—won the club championship with a margin of 100%. She also won the Inter-Lake Y. A. championship at Put-in-Bay. For a boat of this size, she is all that could be desired. We had one Canadian dinghy to compete with, and I may say your design outsailed it on all points. For a boat to afford real sailing with a minimum of draft, cost and trouble, they are a class which, in my opinion, cannot be improved upon."

This class was formed in 1912, but it was last season before most of the boats were built and actually got to racing. Here, as elsewhere, racing in small boats, such as these, has been productive of good sport, and the boats make ideal little day sailers as well.



A DUPLICATE OF THE 42-FOOT POWER CRUISER BEING BUILT FOR THE PRESIDENT OF PERU

A 42-Foot Power Cruiser for Peru

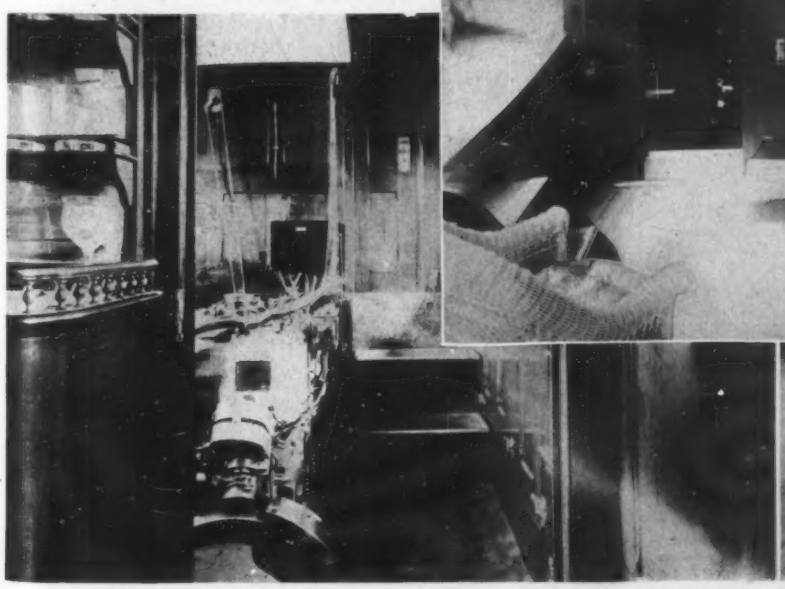
THE Gas Engine & Power Company and Charles L. Seabury Company, Consolidated, Morris Heights, New York City, are now building from their own design a 42-foot, raised-deck, gasolene cruiser for the President of the Republic of Peru. This is the third boat to be built from this design, the other two being the well-known cruisers Vagabond and Spray. These boats have proved to be very able and roomy for craft of this size, and are a success in every way. They combine good looks, ample accommodations, speed and a staunch, seaworthy hull, capable of making a good showing under any conditions.

The new boat is of the raised-deck cruiser type, 42 feet over all, 9 feet 6 inches beam and 3 feet draft. She is equipped with a 4-cylinder, 4-cycle, 6-inch x 6-inch Speedway, 38-48-horsepower motor, giving her a speed of 12 miles per hour. The hull is built of the best material, and all the joiner work is of selected mahogany. There is a large, self-bailing cockpit aft, with steering wheel on starboard side, arranged with controls to motor, and reverse lever. A raised platform for steersman is located at the wheel, and a thwartship seat is arranged at the after end of the cockpit, which is covered with a khaki awning, with side curtains.

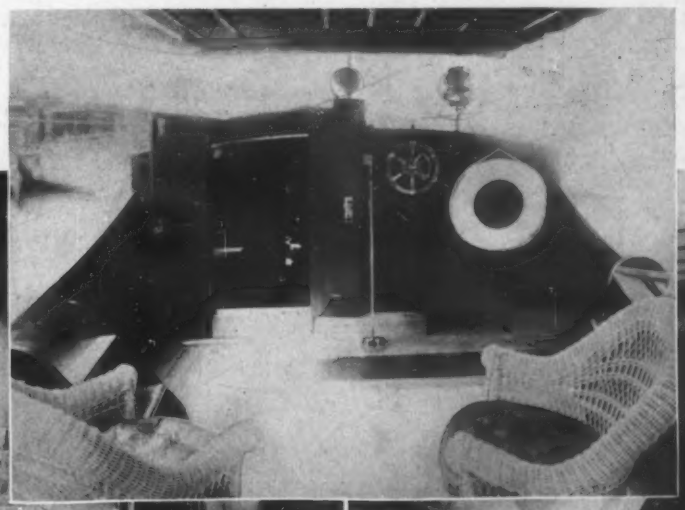
The first compartment leading from the cockpit is the engine room. A galley and engineer's berth are provided here, the latter being curtained off, making a separate compartment. The galley is on the port side, consisting of enamel-lined ice box, alcohol stove, with oven, and a white enameled sink.

The cabin is 14 feet long, and has four extension transom berths, curtained off at night in sleeping-car style. Forward of the cabin is a toilet room with the usual fittings, and a linen locker and wardrobe besides. A ladder, with hatch opening to deck, is arranged in the toilet room. The boat will be lighted by an Apleco electric lighting system.

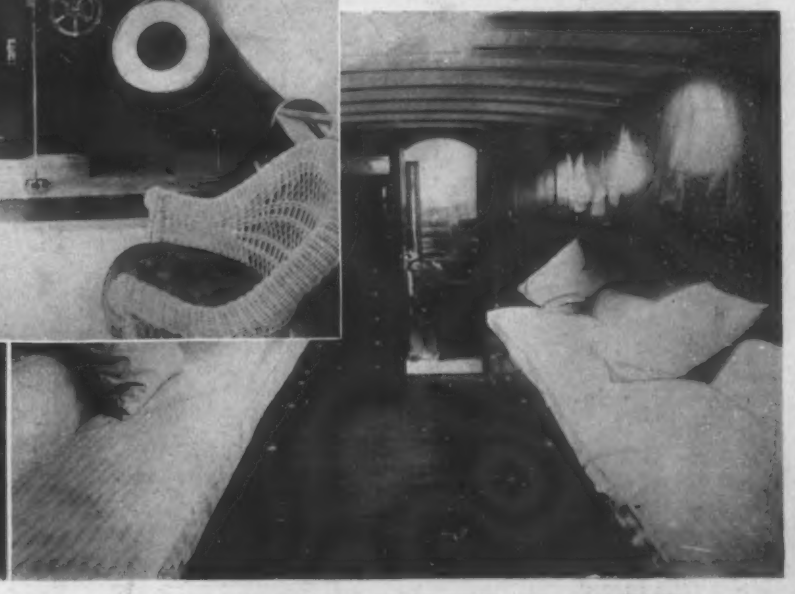
As soon as the boat is completed she will be loaded aboard ship and start on her long voyage to Peru. She will carry the coat-of-arms of the Republic on her stern.



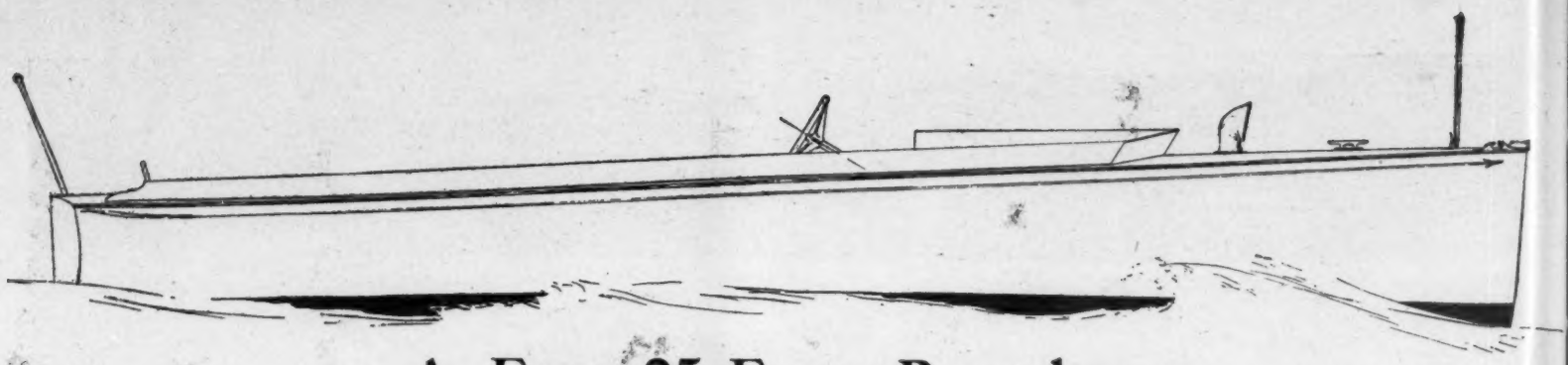
ENGINE ROOM, LOOKING AFT TOWARDS COMPANIONWAY



COCKPIT AND STEERING PLATFORM



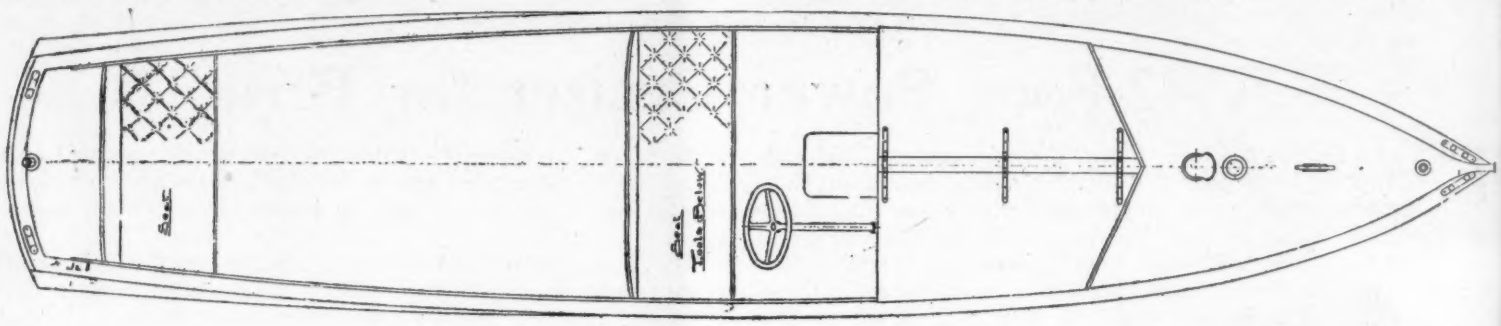
AN UNUSUALLY SPACIOUS MAIN CABIN FOR A 42-FOOTER



A Fast 25-Foot Runabout

AN unusually handsome and well-proportioned little runabout for lake use is to be found in the plans reproduced here. They are of a boat now building for Mr. F. T. Gucker, of Philadelphia, at the yard of John C. Vanderslice, of Camden, from plans of J. Murray Watts, of Philadelphia. This boat will be used at Lake Winnipisaugee, N. H., and the requirements called for the maximum of room and seaworthiness, together with good speed. The little craft is 25 feet long by 5 feet 2 inches beam and 2 feet 10 inches deep.

In the large cockpit there is room for six wicker chairs, while the cushioned seats will accommodate comfortably four or five people, so that a party of ten can be carried without crowding. The engine is a 4-cylinder, 2-cycle motor with a rear starting device and Paragon reverse gear. It is installed forward under a hinged hatch, where it is completely separated from the cockpit. Such a little boat as this can be built for about $650. A number of this general type have already been built from Mr. Watts' design, and have proved very satisfactory.

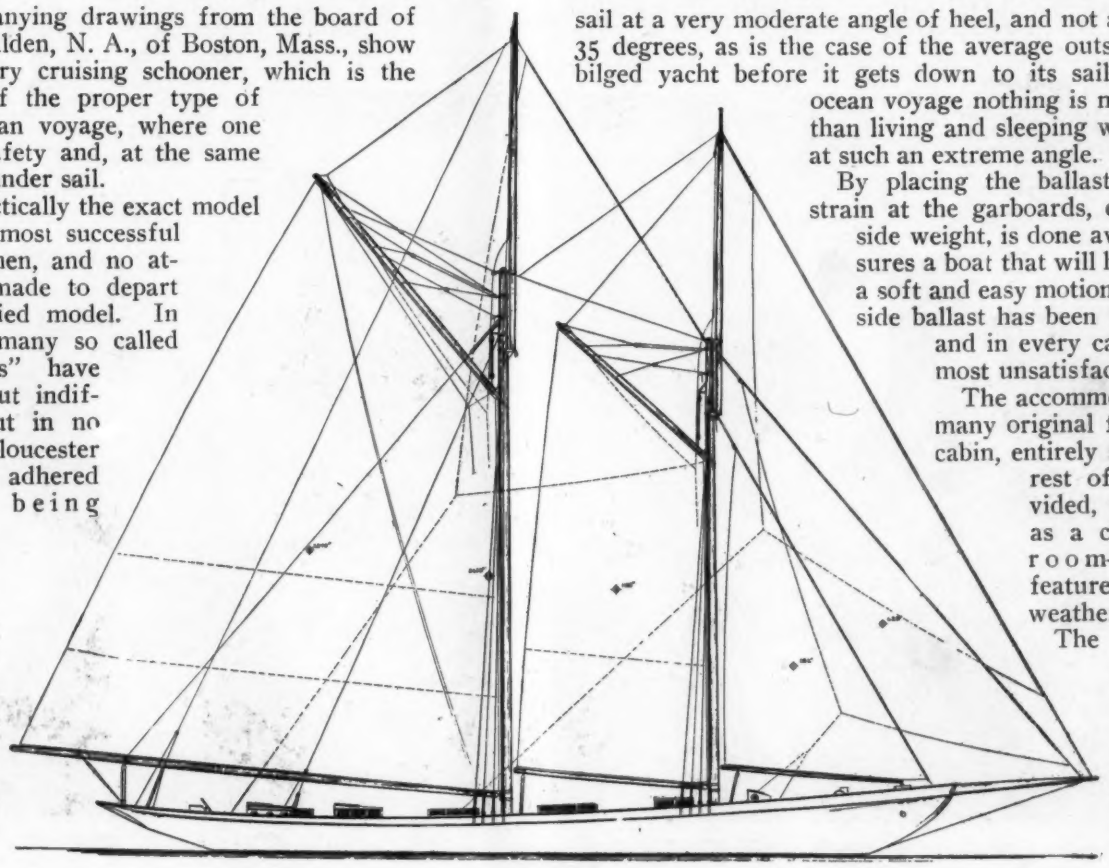


A "Deep Water" Cruising Schooner

THE accompanying drawings from the board of John G. Alden, N. A., of Boston, Mass., show an auxiliary cruising schooner, which is the designer's idea of the proper type of yacht for an ocean voyage, where one wants comfort, safety and, at the same time, a fast boat under sail.

The boat is practically the exact model of the latest and most successful Gloucester fishermen, and no attempt has been made to depart from this well-tried model. In the past a good many so called 'fisherman yachts" have been built with but indifferent success, but in no case has the Gloucester type been strictly adhered to, modifications being made in the design which changed the type of the boat.

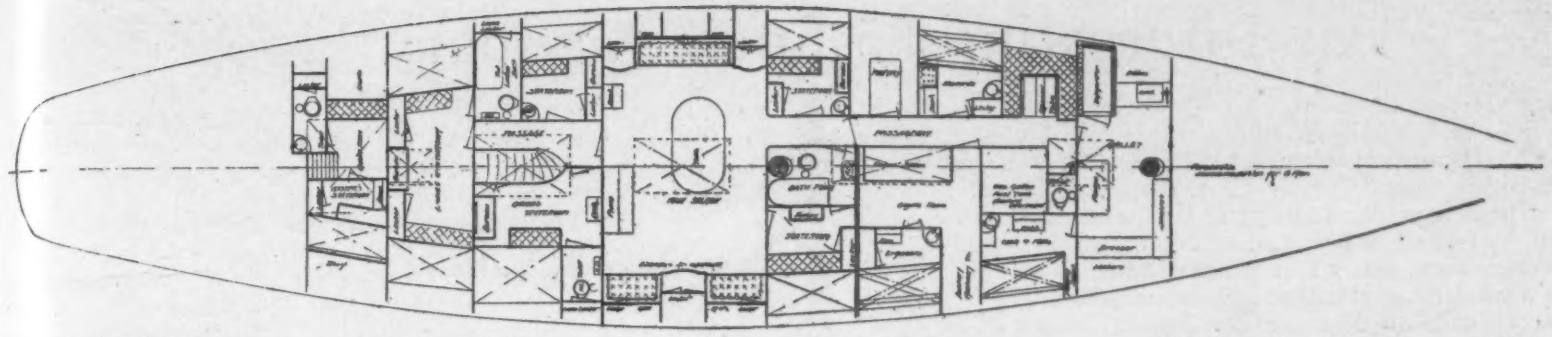
The basic principle of these boats is in their hard bilges and the fact that all, or nearly all, of their ballast is inside. This means a boat that will sail at a very moderate angle of heel, and not at an angle of 25 to 35 degrees, as is the case of the average outside ballasted, soft-bilged yacht before it gets down to its sailing lines. For an ocean voyage nothing is more uncomfortable than living and sleeping with the boat heeled at such an extreme angle.



By placing the ballast inside, the great strain at the garboards, caused by the outside weight, is done away with, and it insures a boat that will have a long life and a soft and easy motion in a seaway. Outside ballast has been tried on fishermen, and in every case has been found most unsatisfactory.

The accommodation plans show many original features. An after cabin, entirely separated from the rest of the boat, is provided, which can be used as a chart and smoking room—a very handy feature at night in wet weather.

The sailing master's stateroom is at one side of this cabin, with easy access to the wheel. This does away with coming into the living quarters of the



boat in wet oilskins, or to consult charts, etc.

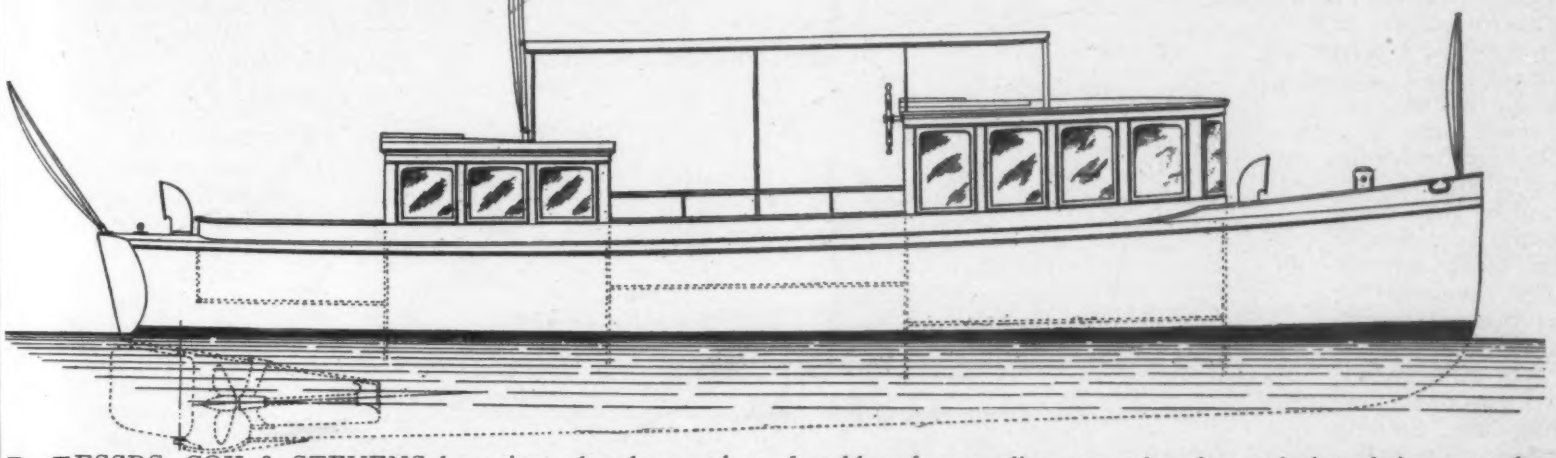
The yacht has excellent accommodations, including one double stateroom aft the full width of the vessel, and four single staterooms. The auxiliary engine is located forward of the owner's quarters, with the officers' staterooms. The crew have exceptionally roomy quarters, an absolute necessity for an ocean voyage.

The auxiliary power consists of a 150-horsepower, six-cylinder engine, which should give 9 knots an hour in smooth water, while the tank capacity is over 1,300 gallons.

The rig is well inboard and the boat should carry her canvas easily and show a good turn of speed.

The principal dimensions are as follows: Length over all, 116 feet; length of water line, 87 feet; beam, 24 feet 6 inches; draft, 13 feet 6 inches; sail area of lower sails, 5,635 square feet.

An Unusual 40-Foot Ferry Launch



MESSRS. COX & STEVENS have just placed an order with the New York Yacht, Launch & Engine Company for a ferry launch to be built from their designs and under their supervision. This boat is to meet rather unusual requirements, and the design is an interesting one.

The dimensions of the boat are: Length over all, 40 feet; beam, 9 feet 6 inches; draft, 3 feet 3 inches.

The owner has a country place on an island, and the launch must be used for carrying not only himself and his guests to the mainland, but also for transporting baggage, tradespeople and servants attached to the house. The trip is quite an exposed one, and for that reason an able vessel was essential.

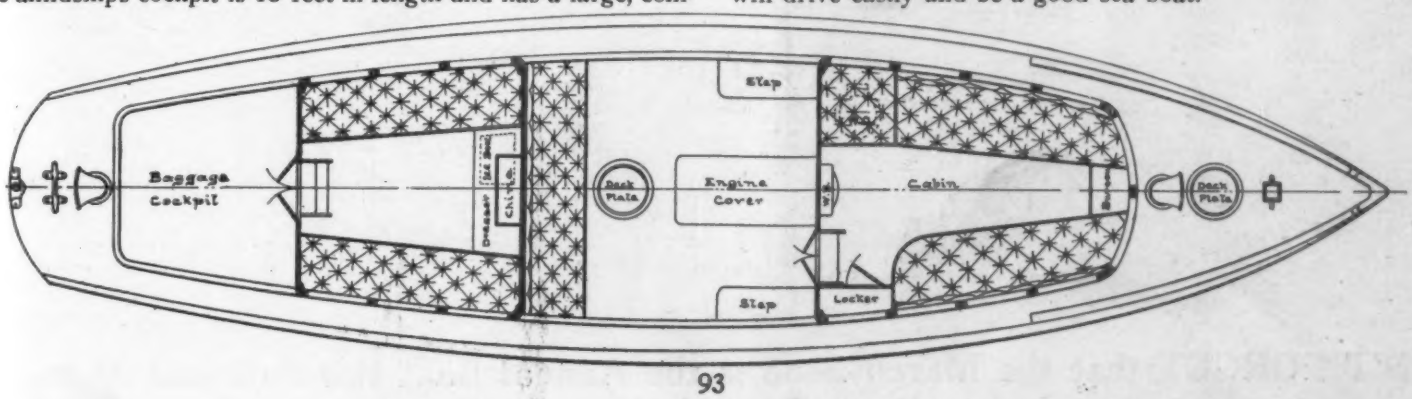
The motive power consists of a Speedway 4-cylinder, 4-cycle engine of 30 horsepower, which will give a speed of better than 12 miles an hour, this engine being located practically amidships and underneath the main cockpit floor. It is controlled by levers and the usual adjustment of spark and throttle attached to a bulkhead at the after end of the forward cabin, the steering wheel being also located here.

The amidships cockpit is 10 feet in length and has a large, comfortable sofa extending across its after end, there being room for a number of wicker chairs in addition. The owner's cabin is 9 feet in length and is arranged with a sofa on each side, both of which can be made up into berths, and also contains a bureau, toilet, locker and folding wash basin. This cabin has full headroom under the carlins.

Directly aft of the cockpit is a small shelter house for the servants, having transom on each side, a dresser, with place for stowage of dishes, and an ice box. Aft of this house and communicating with it by a companion is the after, or baggage, cockpit, which has room for stowage of a number of trunks or stores, and has a tarpaulin to cover it from the weather.

When not in use as a ferry launch this boat will make an excellent cruiser for a small party, and, with good speed and weatherly qualities, will certainly combine many advantages.

The form of hull adopted by the designers is one having good freeboard and a lively sheer, straight stem, flaring sections forward and a broad transom aft, so as to secure the greatest possible amount of room and at the same time insure a model that will drive easily and be a good sea boat.

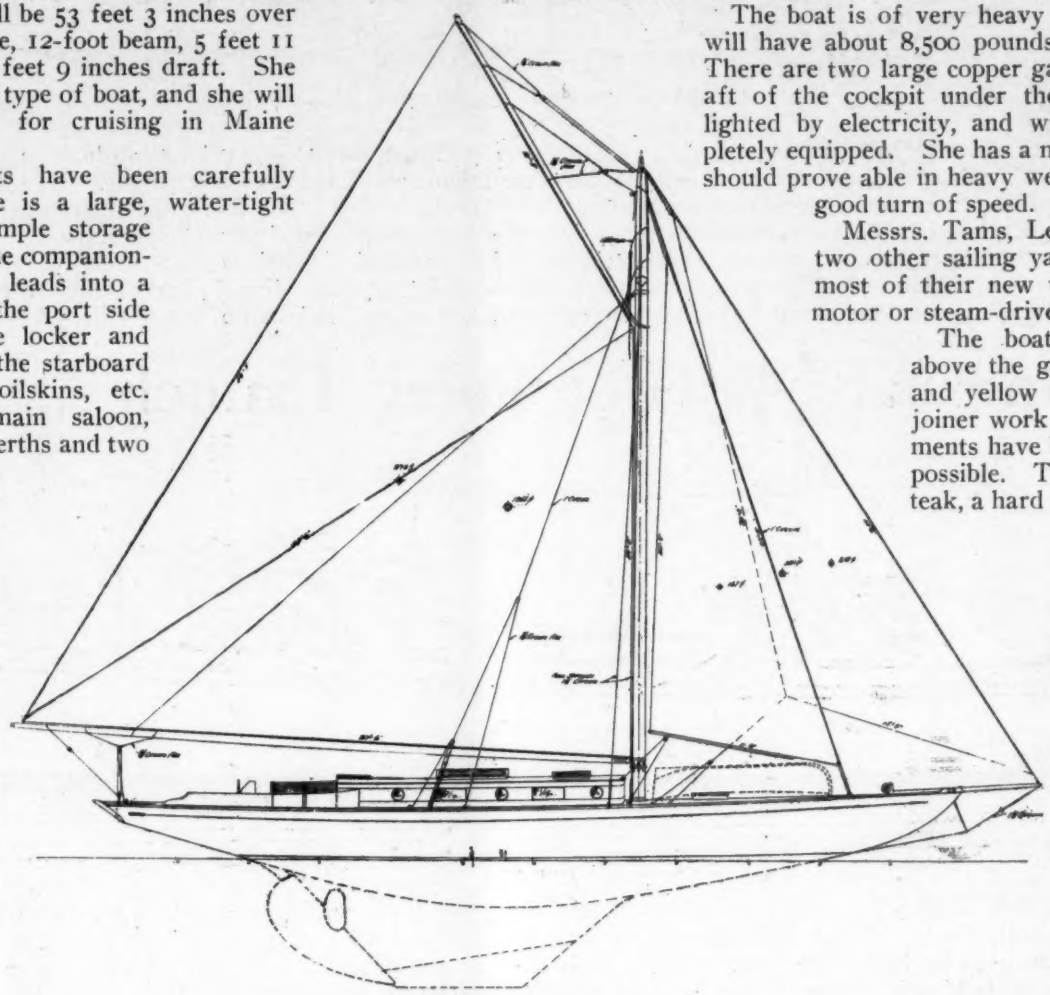


An Interesting 35-Foot Auxiliary Sloop

THE accompanying plans show an interesting auxiliary sloop which is being built from designs by Tams, Lemoine & Crane, of New York, by Hodgdon Brothers, of East Boothbay, Maine, for Mr. C. A. Morse, of Boston.

The new yacht will be 53 feet 3 inches over all, 35 feet water line, 12-foot beam, 5 feet 11 inches depth, and 7 feet 9 inches draft. She is a wholesome, able type of boat, and she will be used principally for cruising in Maine waters.

Her arrangements have been carefully worked out. There is a large, water-tight cockpit aft, with ample storage space beneath it. The companionway from the cabin leads into a small vestibule, on the port side of which is a large locker and chart room, and on the starboard side a locker for oilskins, etc. Then comes the main saloon, having two built-in berths and two transom berths; at the forward end of the saloon are sideboard, lockers, etc. Lockers are provided also under the transom berths. Forward of the saloon, on the port side, is the toilet room. Then comes the motor compartment, in which is installed a four-cylinder, 25-horsepower, medium-duty Sterling engine. The galley is in the motor compartment, having on the starboard side a stove, sink, etc., and on the port side a very large ice chest. The forecastle is very roomy for a boat of this size, and provides berths for two, with ample locker and shelf space and separate toilet room for the crew.

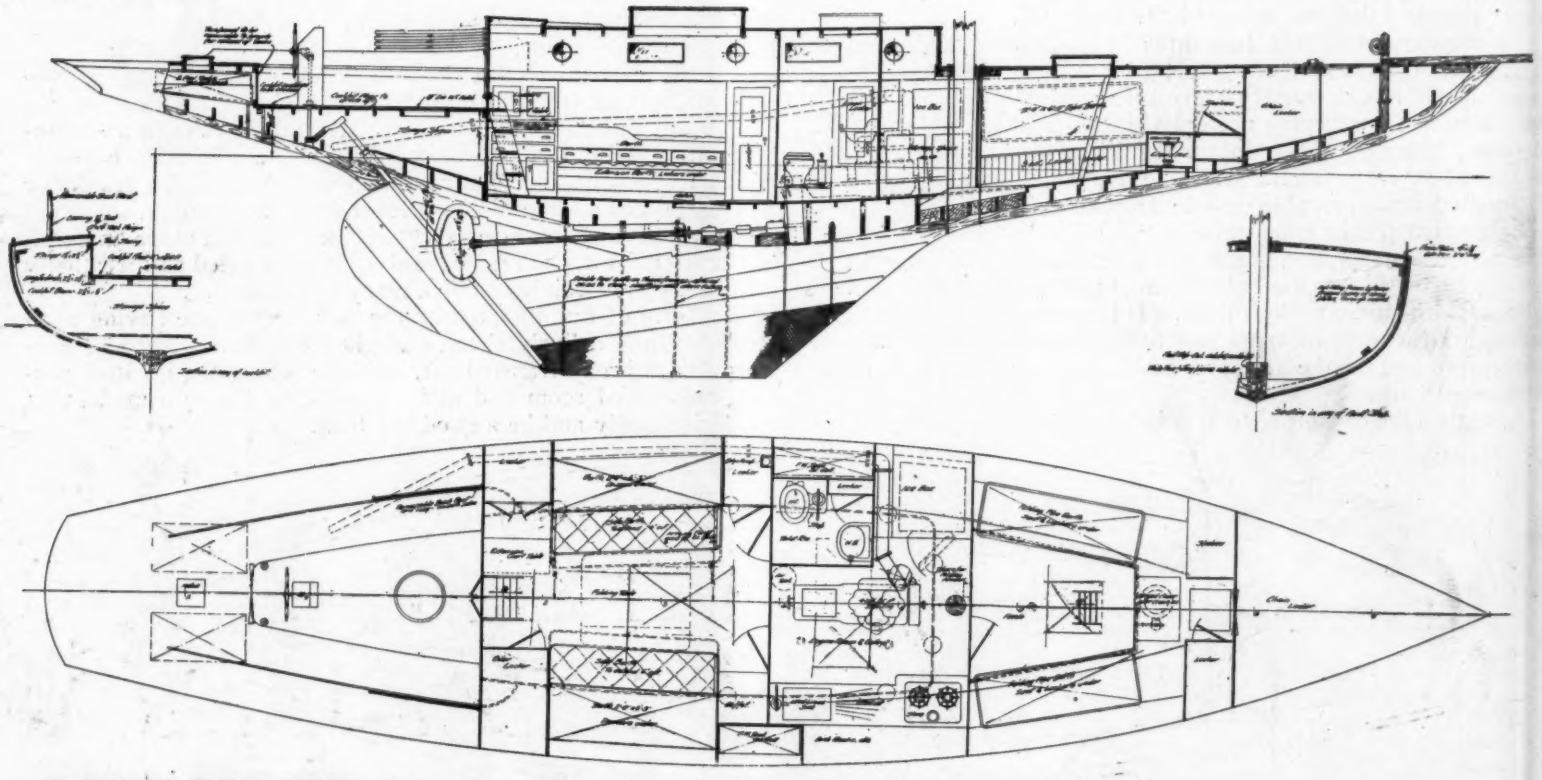


The boat is of very heavy construction, and she will have about 8,500 pounds of lead on the keel. There are two large copper gasolene tanks installed aft of the cockpit under the deck. She will be lighted by electricity, and will be delivered completely equipped. She has a moderate sail plan, and should prove able in heavy weather, and yet have a good turn of speed.

Messrs. Tams, Lemoine & Crane have two other sailing yachts on their boards, most of their new work, however, being motor or steam-driven craft.

The boat is double planked above the garboards, white cedar and yellow pine being used. All joiner work and interior arrangements have been kept as simple as possible. The cabin floors are of teak, a hard wood.

It is distinctly encouraging to note these days the number of new sailing craft that are being built, as by far the larger number of yachts turned out recently have been either motor or steam driven. There is decidedly a renewed interest in sailing yachts, and it is expected that the America's Cup Race this year will enhance this interest.



DON'T FORGET that the March issue is the Annual Boat For Sale and Motor Boat Show Number

MESS ROOM TALK

IN this Department we will answer questions concerning the problems which boat owners are constantly running up against in the operation of their motors or the handling of their boats. Theoretical as well as practical questions will be answered promptly by mail, and when of sufficient interest will be printed for the benefit of YACHTING readers. This service is free. Don't hesitate to make use of it. Address, Information Department, YACHTING, 141 W. 36th St., New York City.

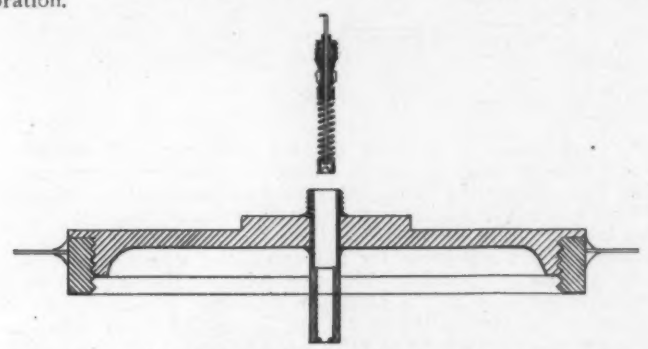
A Convenient Cap for Gasolene Tank

DORCHESTER, MASS.

I was once troubled by very dirty gas filling the feed pipe, and was obliged to keep disconnecting and blowing through the pipe. The result was a very badly burnt mouth—but we got home.

This set me thinking of some way to overcome this difficulty and to get at the inside of the tank. Instead of the usual small plug used in the top of gasolene tanks, the following has been found very successful and convenient:

Have a 4-inch brass screw plate soldered into the top of the gas tank instead of the small plug. This cap is the kind that is used on traps by plumbers. Then procure a common bicycle tire valve and solder it into the cap. The inside should be removed to let the air in while running, and to allow for expansion during warm weather while the boat is idle. A large carpet tack inserted loosely in the top of the valve while the boat is idle will act as a safety valve and allow for expansion and help stop evaporation.



FOUR-INCH CAP FOR GASOLENE TANK, WITH VALVE FOR BLOWING PIPE CLEAR

Keep a small bicycle pump aboard, and if your feed pipe bothers screw this in the inside of the valve, open the valve on the feed pipe and pump until the pipe is blown clear. This will be found to be a very simple and easy method of clearing out the pipe.

I have also found it very convenient, by unscrewing the plate, to reach in and wipe off any sediment that sticks to the bottom of the tank.

F. R. W.

Rig and Cost of Small Cruiser

BUFFALO, N. Y.

I am interested in the 20-foot auxiliary catboat in the December YACHTING, and would like to know about what the cost would be if the boat was built in Florida for those waters? Also, would the boat be able to go to windward with as high a cabin as shown in sketch?

Do you consider a 25-foot cabin boat too small for a yawl rig? Would such a boat be able to go to windward? I want a boat for the Indian River, Florida, and expect to do a little cruising. Any information you can give me regarding a one-man boat will be appreciated.

FLORIDA.

The 20-foot V-bottom catboat by C. H. Dodd in the December YACHTING could probably be built from $250 up, depending on where she was built and how she was finished. I don't know the cost of building in Florida, but should think that the boat could be built there for probably a little less than near New York or Boston, as I presume that labor and lumber are probably somewhat cheaper there than they are in the vicinity of these cities.

The boat could go to windward all right with the cabin house as shown. It is no higher than a trunk cabin would be if the boat were of that type. She is not, of course, a racing boat, and would not turn to windward as fast as one built especially for that purpose.

Personally, I think that a 25-foot over-all cabin boat is too small for a yawl rig, as it cuts the sail area up and does not give you sufficient driving power in any of the sails, besides which she would not go to windward as well as a sloop. I think a pole-mast sloop in a boat of that size, with a moderate rig, well inboard, would give you better satisfaction and be just as safe.

I think that a boat of from 25 to 28 feet, such as this 20-footer under discussion, and not drawing any more water than this boat, but rigged as a sloop, would make a good cruising boat for Florida.

Ballast for a 19-Footer

CHICAGO, ILL.

Would appreciate the following information about a sloop 19 feet 4 inches over all, about a 13-foot waterline, 6-foot beam, and a draft of 3 feet 9 inches, fin keel. She has a liberal amount of freeboard and is fairly stiff. The sail area is about 210 square feet, 180 of which is in the mainsail. Now I would like to make her uncapsizable, and would like to know how much ballast I would require to make her so. I want just enough ballast to make her uncapsizable so that she will not strain too much when driven a little hard.

J. M.

You could not make this boat non-capsizable unless she had a ceiled cockpit that would keep the water out if she ever got a bad knockdown. Otherwise, if she should be knocked down she would be apt to fill and sink.

It is also impossible to say just how much ballast you would need for a boat of this size, as much depends on her shape and the amount of bearing surface she has. Keel boats that I know of about the same dimensions and sail area carry 750 pounds of ballast.

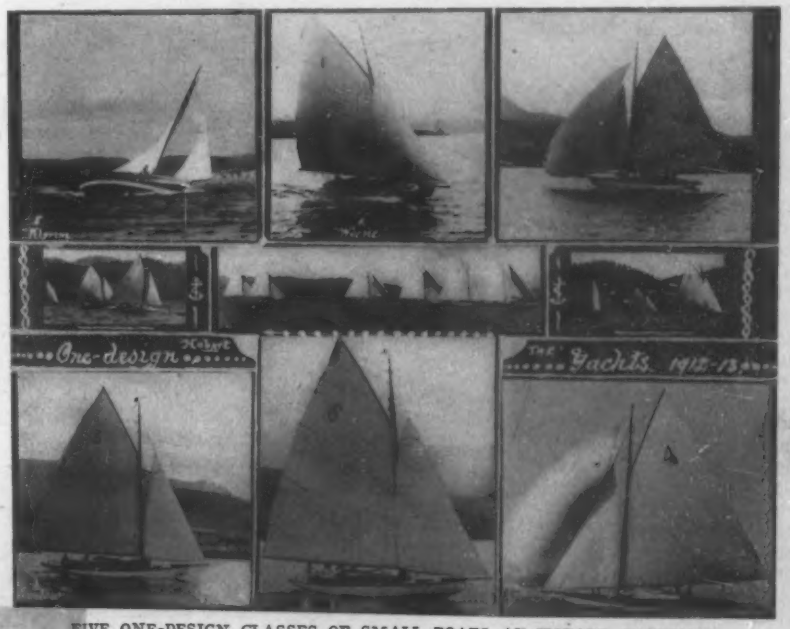
As you say your boat is fairly stiff, I should say from 600 to 700 pounds on the keel would be sufficient, or, if it is stowed inside, from 700 to 750 pounds. But if her bilges are good and hard she may not need this much. That is something that one can only tell by having a knowledge of the shape of the boat.

Measuring Sail Area for One-Design Boats

HOBART, TASMANIA.

I was reading Mr. J. W. Lawrence's article in your December number. He mentioned the Islip one-design class, which are about the same size as the Hobart one-design class, also the Bellport Bay class, which always furnish good racing.

We have five one-design boats in Hobart and get very fine racing, but we have great trouble with the measurement of sails. Our standard size of sail is, as it leaves the loft, luff 20 feet, head 15 feet, leach 27 feet 6 inches, triangle 32 feet 6 inches, round in leach 2 feet 6 inches, and they



FIVE ONE-DESIGN CLASSES OF SMALL BOATS AT HOBART, TASMANIA

are allowed to stretch 10 inches on head and 1 foot 4 inches on foot. We have found from experience that the sails shrink, and it means a new sail every season.

Could you give me an idea how you people measure your one-design sails and what your restrictions are? I enclose photograph of the six Hobart boats. D. BARCLAY, JR.

Most of the one-design classes in this country are built under an agreement as to sail area and length of spars.

In measuring for the sail area, however, the regular measurement formula of the Yacht Racing Association is used. We measure the area of a mainsail by measuring the length of the boom, the length of the gaff from the afterside of the mast, the length of the hoist from the top of boom to the throat cringle. The diagonal from this latter point (which is marked by a back band on the mast) is measured to the outer end of the main boom. This divides the sail into two triangles, and the sail area is found by getting the area of each triangle and adding them.

For the head sail they usually take the area of the fore triangle from the head stay to the foreside of mainmast, the perpendicular being taken from the deck to the highest block on the mast used for headsail halyards. By taking this measurement for your sail you are governed by the spars, and not by the sail, which may shrink or stretch, and by taking the area of the fore triangle no one boat can get a jib that would be larger than the required area.

I think that if you figure in some such way as this you would have no trouble, for each man would get a sail to the limit of the spars, and could not go any further, the hoist, of course, being limited to the mark made on the mast. I should not think that your sails would shrink sufficiently to make a new sail necessary every year, unless your climate is unusually damp and hard on sails.

Flywheel for Small Engine

EGYPT, ME.

Would you please give me the following information in regard to a one-cylinder, two-cycle, jump-spark engine of an unknown make? It has a 4-inch bore by 3½inch stroke. What size flywheel would I have to have for an engine of this size? It is a very light engine with a copper water-jacket. The only mark on the engine is on the grease cup, and that is Thrall-Fishback Motor Company, Detroit, Mich. Could you tell me if this is the name of any make of engine, and also where I could get such a flywheel as I would have to have? W. F. J.

I would advise you that you would need a flywheel about 13 or 14 inches in diameter and 2 to 2½ inches wide on the rim for the engine you speak of, with, of course, the hub bored to the exact diameter of your crankshaft. If your engine turns up very fast a slightly smaller wheel might answer.

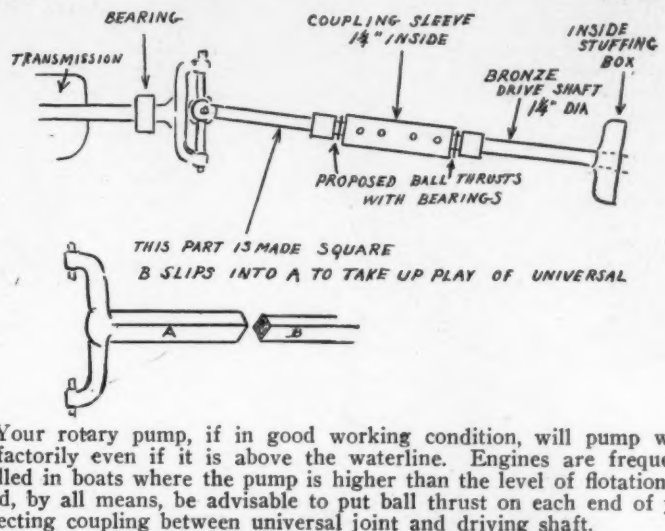
The Thrall-Fishback motor which you speak of I do not think is made at present. The company that manufactured them has gone out of business, if I am not mistaken; at least they do not advertise any more. I believe that you could get a flywheel that would suit your purpose from the maker of some small two-cycle motor, such as the Gray, Bridgeport; Gray & Prior, or Palmer engine companies by writing them and giving them the power, stroke, bore and the speed.

Bearings for Universal Joint

SPRINGFIELD, MASS.

I am building a 30-foot by 8-foot 6-inch hunting cabin boat from knock-down frames, and to date have had absolutely no trouble building same. I propose to install a 40-horsepower auto engine, aluminum base, overhead valves. This has rotary water circulating pump. The plans I have made of engine and boat to aid in installing engine show that this rotary pump comes about 6 inches above waterline. Will this pump work satisfactorily or will I have to relocate same?

I propose to set engine level and drive through 7-inch universal joint. In the automobile there was ball thrust on each end of shoulder of driving shaft; will it be necessary to put ball thrust on each end of connecting coupling as in drawing? Will it be necessary to have bearing as on drawing to keep universal joint in line and to prevent propeller shucking back and forth? I intend to have stuffing-box on inside and bronze bearing outboard. H. S. R.



Your rotary pump, if in good working condition, will pump water satisfactorily even if it is above the waterline. Engines are frequently installed in boats where the pump is higher than the level of flotation. It would, by all means, be advisable to put ball thrust on each end of your connecting coupling between universal joint and driving shaft.

It is best to have a bearing for universal joint where shown in your drawing to prevent play and to keep the joint in line, as considerable strain comes on the joint at this place. Your design is a good one, but I would advise you to tilt the engine slightly by raising forward end so as not to give the universal joint too much work to do. Your idea of having an inside stuffing-box and outside stern bearing is good.

Driftwood from Alongshore

The Genesee Dinghy Fleet

The Genesee Dinghy Fleet, of Rochester, N. Y., which was formed some time ago, had a very successful season last year, and accomplished a great deal for yachting in general on the south shore of Lake Ontario. It has done much to revive interest in sailing, which has been more or less on the wane around the mouth of the Genesee River since the unfortunate Canada's Cup controversy of six years ago.

The races of the fleet are not held in the protected waters of the Genesee River, but are sailed on the open lake, on the shores of which the boat houses are located. Commodore W. G. Sheehan, of the Dinghy Fleet, writes that during the past year their association was the only one which ran successfully scheduled races throughout the entire season on the south shore of Lake Ontario.

All of the members of the fleet are boat owners, and 50 per cent of them have "graduated" from the larger boats to the little 12-foot dinghy, believing that they get more sport in sailing the little fellows.

In the 1913 series, which was sailed on the point system, Commodore Sheehan's boat won first prize and the championship. No. 5, owned by C. K. Ball, won second place (this boat was the winner in 1912), and the third place was captured by No. 2, owned by F. H. Lowe.

SOME OF THE GENESEE DINGHY FLEET AND THE OFFICERS, W. G. SHEEHAN, B. K. SHELDON, DR. F. H. LOW AND C. K. BALL

Several new boats are being built for next year, and it is expected that the 1914 fleet will be considerably larger than that of 1913. Miller, of Charlotte, will probably build some six boats, most of which will sail in the fleet.

The following are the specifications of the boats: Length over all, 11 feet 11 inches; beam, minimum, inside, 4 feet 6 inches; depth, 18½ inches; deck length, 21 inches; transom width, 3 feet 6 inches; transom depth, 14 inches; sail area, 90 square feet; rig, lug.

The officers of the fleet for 1914 are W. G. Shee-

NO. 2, WINNER OF THIRD PLACE

A CLOSE BRUSH BETWEEN TWO OF THE BOATS

THREE MINUTES AFTER THE START OF THE FOURTH JULY RACE

THE WINK. THE LUG SAIL IS USED BY THE FLEET

han, commodore; B. K. Sheldon, Dr. F. H. Low and C. K. Ball. It is expected that next year will see inter-club racing between the Genesee fleet and some of the other dinghy fleets on Lake Ontario. The officers of the fleet are at present negotiating with the Rochester Yacht Club for the use of part of its club house at Somerville for 1914 quarters.

Annual Meeting of Yonkers Corinthian Yacht Club

At the annual meeting of the Yonkers Corinthian Yacht Club in December the treasurer's report was read and voted very satisfactory. The consensus of opinion of those present at that time was that the coming season would be one of action and prosperity. The following officers were elected for 1914: Commodore, Charles A. Valentine, Jr.; vice-commodore, Albert Nachmann; treasurer and financial secretary. William McGregor; recording secretary, George Sherry; fleet captain, Gerald Nolan; fleet surgeon, Dr. Robert H. Shanahan; measurer, Arthur Van Suetendael; chaplain, Rev. William P. Bruce; steward, George E. Bechet; librarian, George Cooper James.

Maumee River Yacht Club

The reports of the various committees of the Maumee River Yacht Club at the annual meeting showed that the club had a most successful year. The club has a membership of 400, which is the limit of membership, and a large waiting list.

The club house is located on the Maumee River in one of the prettiest parks in Toledo, and is one of the most active boating clubs on the Great Lakes. In the fleet sailing under the club's colors there are 56 sailboats, 94 power boats and 32 ice boats, showing a fairly large percentage of members who are "real sailors."

The officers of the club for 1914 are: Commodore, Percy C. Jones; vice-commodore, Louis A. Alexander; rear commodore, Carl F. Halls; recording secretary, Ralph B. Atkinson.

New Boats Building

Among the new boats building that have been reported since last month are the following: From designs by J. Murray Watts, of Philadelphia, Pa., a 67-foot auxiliary topsail schooner, named Viola II, building at Salisbury, Md., for Marshall Jones, Jr., of Pittsburg; a fast runabout, building at Vanderslice's yard, Camden, N. J., for F. T. Gucker, of Philadelphia; a 58-foot cruiser, called the Shark II, building at Salisbury, Md., for S. H. Collum, of Philadelphia, and a number of others for both pleasure and commercial purposes, plans of which have already been furnished.

Among the yachts being built from designs by Cox & Stevens are a large cruising schooner yacht for a prominent yachtsman, by Rice Bros., East Boothbay, Me.; a 40-foot double-cabin ferry launch, and a 43-foot cruising sloop.

W. H. Hand, Jr., of New Bedford, Mass., has orders for a fast 40-foot cruiser for Mr. W. A. Gilchrist, of Chicago; a 45-foot ketch rigged auxiliary cruiser for Mr. William Bross Lloyd, of Chicago; a 30-foot day cruiser for Mr. Addison G. Fay, of Chicago; a 30-foot day cruiser for Mr. J. W. Mould, of Edmonton, Alta.; a 35-foot cruiser for Mr. H. B. Millard, of Albany, N. Y.; a 32-foot runabout for Stauffer-Eshleman Company, of New Orleans, La.; a 33-foot day cruiser for Dr. L. G. Larner, of Tampa, Fla.; a 29-foot fast runabout for Mr. A. Gardiner Cooper, of Brooklyn, N. Y., and a 30-foot 6-inch fast cruiser runabout for Mr. Hand's own use.

The Mill Creek Yacht Club

The Mill Creek Yacht Club has just completed its fourth year, and has crowned its efforts by purchasing a club house, situated at the foot of Flatbush Avenue, Brooklyn, where visiting yachtsmen will find a royal welcome and a deep anchorage. During the past season the club has awarded six silver cups to the winners of the various races. At its last meeting the club enjoyed one of its election suppers, at which the following officers were chosen for the year 1914: Commodore, Henry H. Kuhn, Sr.; vice-commodore, William E. Peckham; rear commodore, John Schlott; fleet captain, Peter Schwarting; secretary, John Remsbecker; treasurer, John H. Mahnken; financial secretary, Philip Fischer; sergeant-at-arms, J. F. De Marrios.

Taunton Yacht Club

At the annual meeting of the Taunton Yacht Club, on December 11, the following officers were elected: Commodore, Joseph S. Williams; vice-commodore, Nathan T. Staples; rear commodore, Frank P. Canedy; treasurer, Frederick E. Goff; secretary, Arnold T. Dean; measurer, Arnold T. Dean; historian, William H. Reed; regatta committee, Clinton V. Sanders, Archie A. Ashley, George H. Robinson, Edward H. Brown, Robert C. Witherell; house committee, Frank P. Canedy, John C. Chace, Fred W. Talbot.

Recent Yacht Transfers

Messrs. Gielow & Orr, naval architects and yacht brokers, of New York, report the following sales and charters of yachts for the month of December:

Steam yacht Walucia, Mr. Henry D. Walbridge, sold to Mr. William B. Hurst, Baltimore, Md.; the steam auxiliary brigantine yacht Wild Duck, Mr. Paul E. DeFere, sold to Gulf Refining Company; steel steam yacht Bellemere, Mr. W. P. Natale, sold to Mr. C. R. Nedlonger; the 138-ton twin-screw steel gasolene yacht Josephine, Mr. Edward Shearson, sold to Mr. George W. Elkins, Philadelphia, Pa.; the 133-foot steam yacht Legonia, Mr. William B. Hurst, sold to Mr. Henry D. Walbridge; the 131-foot steam yacht Levanter III, Mr. Wilson Marshall, sold to Mr. Charles E. Everest, Rochester, N. Y.; the auxiliary schooner yacht Velocity II, Mr. Thomas Nevins, sold to a company in New London, who will use the boat for commercial service; the steam yacht Indolent, 106 feet in length, sold for the Wallace M. Campbell Estate to Jessie L. Hansen; the 82-foot twin-screw motor yacht Wethea, Mr. Howard W. Baker, sold to Mr. John Ringling; the 85-foot power houseboat U. S. A., Messrs. McCoy Bros., chartered to Mr. Robert F. Wolf, who is on board cruising; the Bermuda racer Tocsam II, Mr. L. W. Mulford (the intention of the new owner is to use the boat principally on the St. Lawrence River and the Great Lakes); the auxiliary yawl Vesta, Mr. H. G. Merry, sold to Mr. F. W. McAllister, Baltimore; auxiliary catboat Turza, Mr. F. D. Sherman, sold to Mr. W. F. Keller of New York; auxiliary yawl Senca, Mr. E. H. Sheather, sold to Mr. S. H. Very for cruising on Long Island Sound.

The End of the Reliance

The last America's Cup defender, Reliance, which successfully sailed against Sir Thomas Lipton's Shamrock III in 1903, and which since then has graced the shores of City Island, is to be broken up. Her racing career is over. She has filled her purpose and has never been in commission since the year she was built. She was a fast boat, practically an unbeaten boat, but was of no use for anything except a race like that for the America's Cup—too big for a sloop, with no one in her class to sail against, and not suited for conversion into a schooner, she has stood idle in Jacob's yard for eleven years, a club over any would-be challenger for the Cup. She has been sold to Capt. Lem Miller, and workmen have already started demolishing her.

The 1914 Bermuda Race

The annual power boat race to Bermuda will again be under the auspices of the Yachtsmen's Club of Philadelphia, and will be started from that city on June 6. The rules and regulations governing the contest are practically the same as those of last year, and entry blanks and full information can be obtained from Dr. Eugene Swayne, chairman of the regatta committee, at the Yachtsmen's Club, 104 South Juniper Street, Philadelphia.

Three or four boats have already promised to go and a number of other entries are expected. It can be stated, beyond a reasonable doubt, that a Western boat will be entered in the event this year.

America's Cup Defenders and Challenger Much secrecy still surrounds Shamrock IV, the challenger for the America's Cup, as well as the three boats that are building as possible defenders. Through this fog of silence and mystery, however, a few facts occasionally sift, though as a rule most of the rumors that one hears are gossip, pure and simple.

Nothing, of course, is definitely known of the form of Shamrock IV, though, from what can be learned from the boating and sporting magazines on the other side, designer Nicholson will probably break through English tradition, and turn out a boat of a radical type. It is stated on good authority that she will have a very large sail area, and that the designer may take liberties with this factor of the rating rule, banking on the average conditions that are found in September off Sandy Hook. It is said that the mast will be the longest ever stepped in a cup challenger of this size. It is expected that she will be ready in April, if nothing unforeseen occurs, and will be sent over under jury rig early in the summer. Whether or not she will be allowed to tow over has not been definitely stated, but as far as that goes there will be probably less strain on the boat in sailing under jury rig than in towing, especially if any head seas are encountered.

The Gardner boat, it is said, will also have a large rig, 12,000 square feet being spoken of as the sail area, with the main boom 82 feet long. In the hands of "Bill" Dennis and Harry Haff, she will certainly put up a hard, aggressive fight.

Rumors have come from Bristol that Herreshoff, after casting the keel of the "flag officer's" boat, changed her plan so as to make it necessary to increase the weight of lead from 62 to 75 tons. This looks as if he also were contemplating more sail area. How reliable the news is can not be stated. It is not like Herreshoff to "make a mistake," as several of the reports claim, in such an important matter as an America's Cup Defender. A small centerboard will work through the lead keel.

The Owen boat, which is being built at the Bath Iron Works, is very much of a dark horse. It is Owen's first essav in a boat of this size for cup-defense honors, but, judging from what he has done with the universal rule in smaller boats, it should be anybody's race up to the time the Cup Committee chooses the defender.

As as has been said before, two of the boats will probably have amateur helmsmen, which is a good thing, provided there is not so much amateur talent on the quarter-deck as to be in one another's way—as has happened before. Too much advice may sometimes be worse than not enough. The Herreshoff boat will be out by May 1, it is said, and the other boats shortly afterwards.

Trap Shooting at Yacht Clubs It usually happens that when the last boat is hauled out and the thermometer begins playing hide and seek with the freezing point, that the yacht clubs are shut up tighter than an illicit still when the government inspectors are around. This is a bad condition of affairs, as in most cases it not only keeps the property idle and useless during the greater part of the year, but allows the members to drift apart, with the consequent danger of loss of interest.

Yet yacht club properties often offer exceptional facilities for winter sports, and one of the best of these is trap shooting. A great many of the clubs in the last year or so have gone in for this and formed trap shooting teams, which meet regularly Saturdays, Sundays and holidays throughout the winter. As a rule, clubs on the water are especially well located for the building of shooting platforms and the placing of traps. The sport usually appeals to the members, whether or not they have shot before. Interclub matches can be arranged, and the members are thus held together throughout the year. In many instances, also, such gun clubs contribute substantially towards getting new men interested in yachting. Joining the club primarily for the shooting privilege, when summer comes around, they naturally take to boats.

This is a matter that is heartily commended, and one that will bear a good deal of thought by those clubs who desire to make use of their facilities for more than just the summer season.

Motor-Boat Show Number The March number of YACHTING will be the annual motor-boat show number, and will contain a complete review of the new designs in boats, engines and accessories that have been seen at the New York and Chicago shows. The Chicago show does not open until February 28, but it is stated that most of the exhibits will go from Madison Square Garden, New York, to the Coliseum, Chicago, in a solid freight train of thirty-odd cars. Practically all the exhibitors of the East will have the same exhibits at the Chicago as at the New York show, while the decorations will be the same.

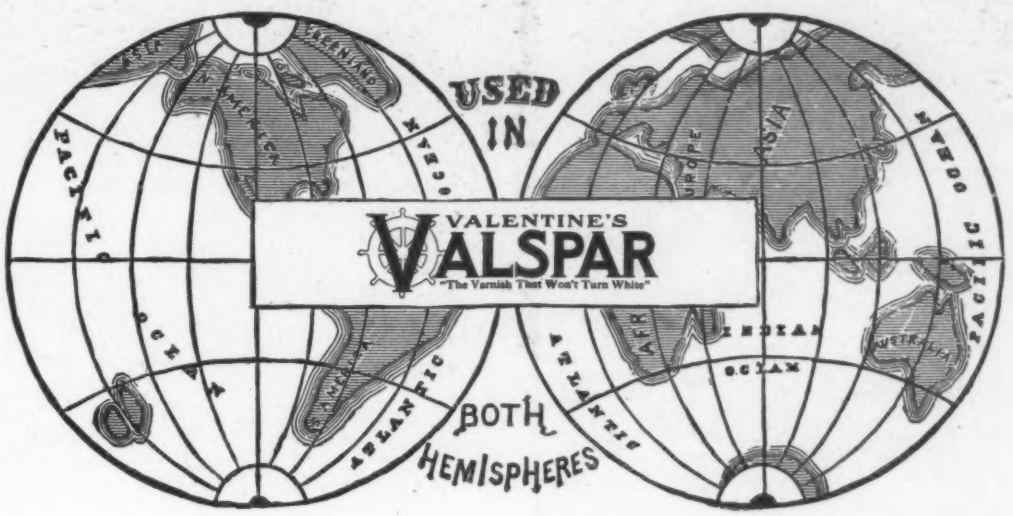
The success of the Chicago show is said to be already assured. It has been seven years since a show was held there, and the conditions are certainly "ripe" for such an exposition on the shores of Lake Michigan.

This issue will also be the Spring "Boat-for-Sale" Number, containing all the latest and best offerings of both power and sail boats on the market. It is always eagerly read, on account of those wanting to pick up early the boat they are to sail the coming summer.

Boat buying, it is frequently said, is in a measure second cousin to horse trading, and the spring is the time when most of the "swopping" is done. Therefore, if you want to sell your boat this spring and have not already made arrangements to advertise her in the spring number of YACHTING, send in a description of her and the best photograph you can lay your hands on, at once.

Harmsworth Trophy Trials for the West Heretofore most of the racing in connection with the British International Cup, the premier motor-boat trophy of the world, has been held in the East, along the Atlantic seaboard. Last year, however, one Western boat went to England with the American team to try to win the cup back, and the elimination races this year to select challengers for this event will be held at Chicago next summer. This announcement has been made by the Motor Boat Club of America.

Nothing tangible is yet forthcoming regarding challengers, although it is stated, on fairly good authority, that plans are being taken by several who have been prominent in the speed-boat racing heretofore, to assure a new boat that will be faster than anything in this country. One boat has already been completed that has done, in private trials, 50 miles an hour—and there is said to be even more up her sleeve. If she can keep this up for 30 nautical miles she may have a show to win the cup back—who can tell?



A world-wide fleet protected by Valspar

The fact that Valspar-varnished craft are in all navigable waters, generally speaking, is significant of much more than the popularity of Valspar. It is significant of quality so high as to show under *all* natural conditions.

Imagine what some of these conditions are. Valspar must withstand the heat of the Indian Ocean, the cold of the waters off Labrador, the heels of rough-shod Flemish boatsmen, the violence of storms in the China Sea, the salt of the Great Salt Lake.

So well does it meet the varying requirements of these different localities, that it gains continued and increasing use in each of them. Quality talks in all languages, and the universal word for quality in varnish is "Valspar".

Valspar is a hard, brilliant varnish that *never turns white in water*. Dries dust-free in two hours, hard overnight. Three full coats, properly applied, may be expected to last the whole season, and longer when conditions are favorable.

Write for our interesting book on how to varnish boats, including use of primers, fillers, stains, putty, etc. Free.

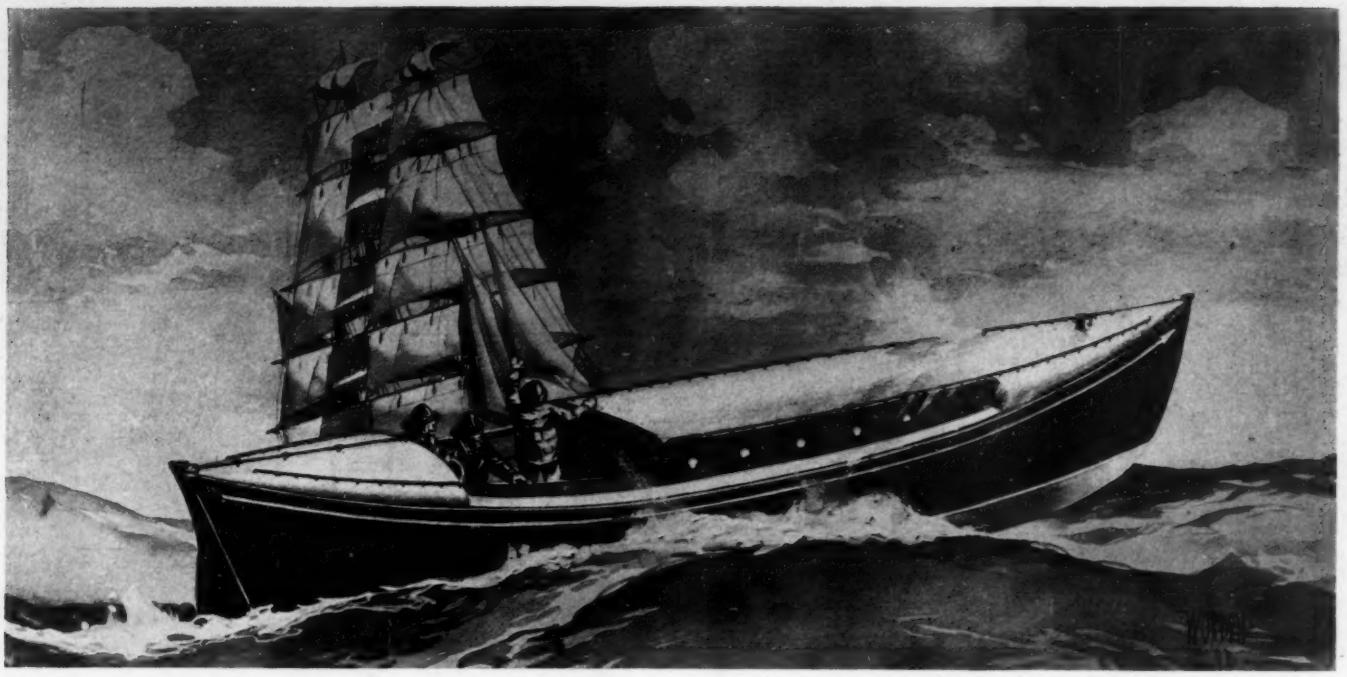
Look for us at the New York and Chicago Motor Boat Shows

VALENTINE & COMPANY 456 FOURTH AVENUE NEW YORK CITY

TRADE VALENTINE'S VARNISHES MARK *Largest manufacturers of high-grade varnishes in the world.*

NEW YORK CHICAGO BOSTON (Established 1832) TORONTO PARIS AMSTERDAM

The varnish that ***won't turn white***



The new 36-foot Holmes cruiser, built on the model of their power lifeboats supplied to the U. S. Government

Of Interest to the Skipper

The Holmes "Lifeboat" Power Cruiser

A power lifeboat that serves admirably as a cruising yacht has been developed by the Holmes Motor Company, Inc., of West Mystic, Conn. The Holmes lifeboat, as every yachtsman knows, is in use at all the principal life-saving stations on the seaboard and lakes. These sturdy power craft were chosen by the government after exhaustive tests, and the efficiency of the Holmes-powered boat has been repeatedly demonstrated.

In his report for the year just closed, S. I. Kimball, general superintendent of the United States Life Saving Service, points out that of the 4,096 persons taken off of vessels in distress by the life-saving crews, 2,748, or more than half, were transported in power boats. No stronger praise for the type can be had.

The Holmes power lifeboat represents the culmination of experiments and exhaustive tests conducted by the builders working in conjunction with government experts, who demanded the best that can be made. The Holmes motor met every requirement of the service. Its reliability in operation, the quality of material employed in its construction, the simplicity of design and ease with which repairs can be effected, were satisfactorily proved.

The type of boat in which about seventy of these special Holmes motors have been installed was evolved with painstaking care and thought. It is a 36-footer, capable of world-girdling voyages so far as absolute safety at sea is concerned. Give one of these Holmes lifeboats a big fuel capacity and she could stand weather that would try giant "liners." The size of a vessel does not determine her weatherly qualities, because a properly-designed 36-footer can live where commerce carriers cannot.

In response to a general demand for this lifeboat fitted as a yacht, the Holmes Motor Company, Inc., have given over a section of their plant to this work, government specifications being followed so that the hulls shall embody those sturdy, buoyant qualities that have made the type famous. The cabin design, however, is a marked departure, yet the construction is in keeping with that of the hull strength. This cabin affords comfort not found in many "up-to-the-minute" yachts. The finish may be luxurious or plain. Costly wood will be used to meet certain requirements, and the interior arrangements provide for as many as six persons on extended cruises.

The motor is installed in an after compartment that is watertight and fireproof. Motor controls are on the bulkhead convenient to steering wheel. Kerosene is used for fuel, and the stock boat has a cruising radius of several hundred miles. The motor is air-starting, operates a dynamo for lighting all compartments, and the propelling plant may be let alone and almost forgotten while under way. With danger of fire thus minimized the Holmes power cruiser, built on lifeboat lines, marks a new era.

Tests with the Holmes power lifeboat of cruiser type are said to show that it cannot founder. Either the cabin or motor compartment will float the craft if she is otherwise filled. The self-bailing cockpit also clears itself of water very fast. A double skin does away with leaks.

Bruns, Kimball & Co. Expand

The well-known engine dealers and yacht brokers, Bruns, Kimball & Co., 132 Liberty street, New York, have expanded their already large business by the opening of a branch store at 608 Arch Street, Philadelphia. This new store will carry the same general line as the parent store in New York, including the famous Sterling and the heavy-duty four-cycle Clay, which has now been developed into one of the most successful kerosene or crude oil engines on the market. The two-cycle Hubbard line and the popular Northwestern two-cycle motors and the reliable Hartford engine especially appeal to the small launch owner and to the fishing trade. This will be one of the leading two-cycle lines in Philadelphia.

The branch store will follow the established policy of the New York store, in that it will accept used engines in part payment for new engines, and will make a most liberal and fair allowance in each case. These used engines are then rebuilt in Bruns, Kimball & Co.'s own work shops by their skilled mechanics. Bruns, Kimball & Co. issue a regular monthly list of these rebuilt motors, which will be of interest to any prospective buyer, and may be had free for the asking. The New York store is now carrying a stock of over 200 new and rebuilt motors. This will compare quite favorably to the average motor boat show as to the number of machines exhibited and variety of sizes and types. In addition, both stores carry a large stock of accessories.

Prest-O-Lite for Boat Lighting

The question of simple, economical and reliable lights is one that holds a prominent place in the mind of every boat owner, for upon these considerations depend not only his comfort and pleasure, but sometimes his safety as well. Storage acetylene for this purpose is being adopted by many boat owners. This system of lighting, as provided in Prest-O-Lite, has been in almost universal use on automobiles for years, and its adoption for boat lighting is equally practical.

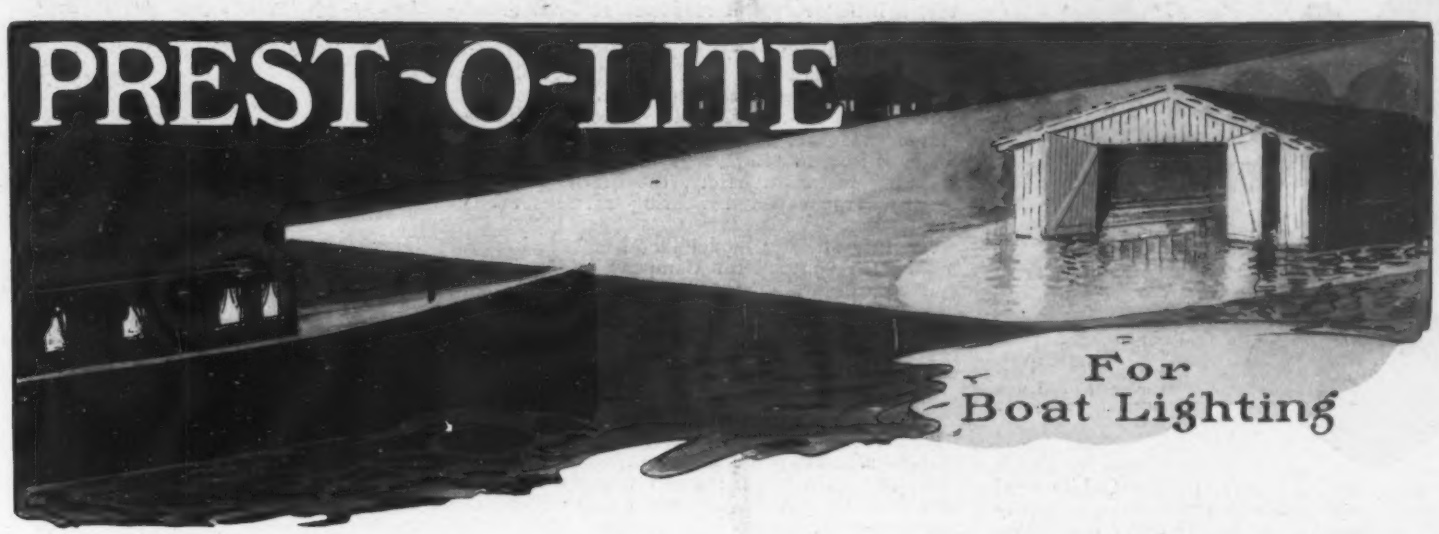
Acetylene light is a clear, soft illuminant of extremely high candlepower. Gas fixtures suitable for its use in motor boats are readily obtainable in designs to correspond to the individual taste of the owner. This brings the problem of boat lighting down to the simplicity of lighting a house. Moreover, the item of convenience is not lost sight of, for the interior lights may be provided with any one of a number of friction lighters, operated simply by pulling a string. When gas is used in the red and green side lights and the searchlight, these may be equipped with an automatic lighter so that the gas may be turned on and off at will by merely touching a button. The Prest-O-Liter, as it is called, consists of a controller, mounted inside the cabin, pilot-house, or wherever most convenient. The gas is turned on at this controller and lighted by pushing a button. One wire leads to each side light, and pressing the button places a spark at the burner tips. The spark is furnished by a few dry cells and vibrator coil. The use of Presto-O-Lite for the searchlight recommends itself highly for boat service. The acetylene flame has a peculiarly piercing quality, and the gas-burning searchlight is said to retain its efficiency under the most adverse weather conditions.

The Prest-O-Lite system of storing acetylene, so familiar in the automobile world, consists of acetylene—dried, purified and stored in seamless steel cylinders. Its operation is simple, as the gas is turned on and off like a gas jet. A pressure gage indicates at all times just what part of the gas supply remains to be used. Installing Prest-O-Lite on boats presents no difficulties. The cylinder, or cylinders, may be placed in any convenient location, and the gas piped to all parts of the boat. The piping recommended is galvanized iron (⅛ inch I. P. S.). An important feature of the use of Prest-O-Lite on boats is the automatic reducing valve attached to the valve of the cylinder. This device automatically keeps the gas in the pipe lines at low pressure.

One need not even change lamps for burning gas in the red and green lights, as these may be easily converted into combination oil and acetylene lamps by the use of an oil lamp adapter which is easily inserted.

Prest-O-Lites are kept for sale and exchange by almost every dealer in automobiles or motor

PREST-O-LITE



You want *dependable* lighting on your boat.

It must not have mysterious troubles.

Must not fail you far from help.

Prest-O-Lite has proved its absolute reliability—its freedom from trouble—its efficiency.

And you do not expose yourself to the constant care of delicate and complicated apparatus—you need not clutter up your boat with dynamos, batteries, shunts, switchboards or delicate connections—you need not sacrifice the power and speed of your boat.

The Result of Experience

"NEW YORK CITY, Dec. 9, 1913.
PREST-O-LITE CO.,
Indianapolis, Ind.
GENTLEMEN:

Is your lighting system good for 47 ft. cruiser I am now building? I'm sick of electric generators, storage cells, automatic cut-offs, meters, etc., all of which junk I've had in previous boats. Please send me information."

(Name on request)

Prest-O-Lite is simple, substantial, trouble proof.

Any one can understand and operate it. It requires no extra mechanism and weighs little.

It not only costs less to install but far less to operate than any electric system. Electrical repairs, battery replacements, light bulbs, fuel consumed in driving dynamo and other items cost far more than the necessary amount of Prest-O-Lite gas.

It does not rob your boat of speed by using power to run a generator.

Prest-O-Lite in different sizes provides ample supply of light for any size of boat.

"Push the Button" Convenience

Ideal convenience in lighting the searchlight and the port and starboard lights, is afforded by the Prest-O-Liter. Turn on the gas, press a button and the lamps are lit, with the flame correct in height.

Prest-O-Lite can also be used, with attractive fixtures, for any number or kind of cabin lights. The gas may be turned on and off at the jet, precisely like city gas. Our Automatic Reducing Valve gives the correct flame in all lamps at all times, no matter how many are turned on.

Send for this Folder

It tells why Prest-O-Lite is the best, simplest and most convenient lighting system for any boat, from a small sail boat to a big steam yacht.

It shows views of fine yachts and power boats with Prest-O-Lite equipment.

Get the real facts on lighting before you buy any lighting equipment.

The Prest-O-Lite Co., Inc.

238 Speedway, Indianapolis, Ind.

Exchange Agencies Everywhere

Simple to Install

Prest-O-Lite installation is very simple. Any plumber or mechanic can do the work in a few hours.

The Prest-O-Lite Oil Lamp Adapter is easily and quickly installed in any oil lamp and makes it a combination gas-and-oil lamp with the oil in reserve.

The gas connections (and the automatic lighter connection, if also used) are instantly detachable, making the lamps easy to disconnect if you wish to remove them during the day.

THE PREST-O-LITE CO., Inc.
238 Speedway, Indianapolis, Ind.

Please send information on **all** Lighting Systems to

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_____

_____

Prest-O-Lite Automatic Reducing Valve, Side Light Controller and Lamp Adapter for yacht use.

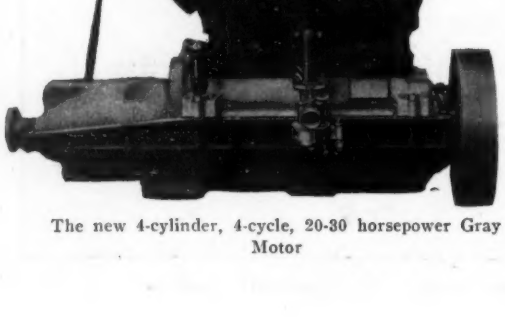
boat supplies, and the user of Prest-O-Lite need never fear being unable to renew his gas supply when on a cruise, for at nearly every landing he would be within easy distance of a service station. The size of cylinders needed to supply a boat-lighting system varies according to the lighting requirements. Prest-O-Lite is sold in four different sizes, of 10 cubic feet, 30 cubic feet, 40 cubic feet and 70 cubic feet capacity. Still larger sizes, containing 100 feet and over, may be had under special arrangement. The size of burner depends upon the compartment to be lighted. Burners consuming only ¼ cubic foot of gas per hour will be sufficient for the galley, side lights, toilet room and other small compartments, while burners of ½ cubic foot will prove ssufficient for the cabin. The sum of burners supplied, the probable amount of night running, and the number of lights which will usually be in service at one time, should determine the size and number of cylinders needed.

The gas system is now in use on many steam and sail yachts of large sizes, as well as in motor and sailboats of smaller dimensions. Descriptive literature, with suggestions for installations, may be had upon request of the Prest-O-Lite Company, Inc., Indianapolis, Ind.

A New Four-Cycle Gray for 1914

The very latest thing from the Gray Motor Company, of Detroit, Mich., is the announcement of a new model marine engine of the four-cycle type. The Gray Company has been considering this step for the past two years, and during this time have been conducting a most thorough investigation among their large agency and sales organization to determine the requirements of the buying public, the one idea being to select sizes that could be built in quantities, sold at reasonable prices, and at the same time maintain an exceptionally high standard of quality. During this period the engineering and experimental departments have been exceedingly busy along these lines. The sizes were definitely decided upon some little time ago, and the engines, which are ready for business, will be on exhibition at the Chicago and the New York Motor Boat Shows.

This model, which is called the Model "C," is made in two sizes. One is a four-cylinder *en bloc* machine, having a bore of 4⅛ inches and stroke of 5¼ inches, and weighs 600 pounds. It develops 20 horsepower at 700 revolutions per minute, a little over 30 horsepower at 1,000 revolutions per minute. The other is a six-cylinder size, 35-50 horsepower.

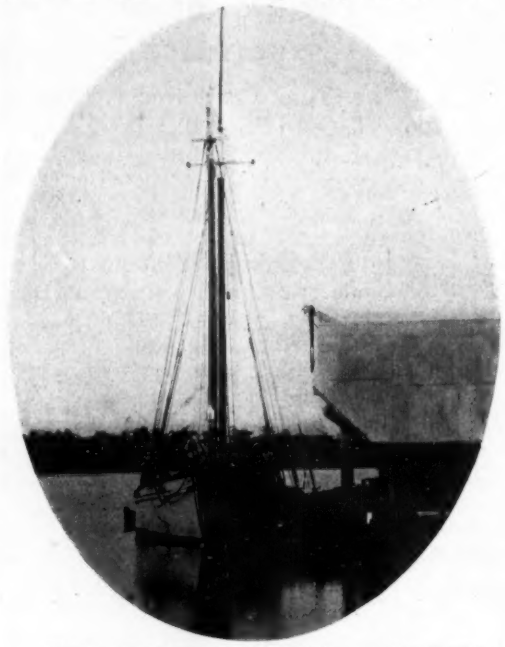


The new 4-cylinder, 4-cycle, 20-30 horsepower Gray Motor

The motor is made up of a unit power plant, as shown in the photograph herewith, and is never sold without the reverse gear. Base of engine and clutch cover are made of aluminum; oil pan is made of iron, to add strength and rigidity. There is a big factor of safety, the bearings are unusually large and the wearing surfaces are all ample.

Another striking model that has been brought out by the Gray Motor Company is a new two-cylinder, 6-horsepower Gray unit power plant, called the Gray Baby Grand.

This engine was brought out to cover a field that has been largely overlooked, and is built especially to meet the demand for an extra fine machine to be used in the very highest class mahogany yacht tenders; or, in other words, it is built for the man who is looking for something that is absolutely the highest class that can be obtained. Just as the piano manufacturer has embodied all the quality and excellence of the grand concert piano in a smaller edition—the Baby Grand—so the Gray engineers have endeavored to show engine perfection in a smaller unit. The result is the *Gray Baby Grand*.



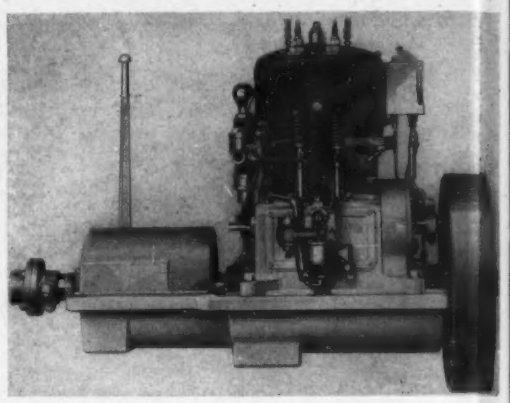
Trading Schooner Matilde Kelting, equipped with 36-horsepower Wolverine, for use in the Nicaragua coasting trade

Wolverine in Central America

We reproduce herewith a very interesting photograph, showing the dependence placed upon gasolene engines for commercial use even in the most out-of-the-way quarters of the globe. This is of the schooner Mathilde Kelting, of Prinzapulca, Nicaragua, used for carrying freight and passengers along the coast and up the rivers. She is equipped with a 36-horsepower Wolverine engine.

A 1914 Sterling Heavy-Duty Motor

The two-cylinder, 8-10-horsepower heavy-duty Sterling engine that is described here forms a part of the complete line of four-cycle engines that the Sterling Engine Company, Buffalo, N. Y., is offering for the season of 1914. It is the smallest of the Sterling heavy-duty engines, and is a long-stroke, slow-speed design of great flexibility, and built especially for heavy and continuous work. It has a range of speed from 150 to 600 revolutions per minute, and develops its rated horsepower at 400 and 500 revolutions per minute. The cylinders are cast in one pair, an arrangement which reduces the number of joints and the possibility of leakage to a minimum, and



The new 8-10-horsepower, heavy-duty Sterling engine for auxiliaries, fishing boats, etc.

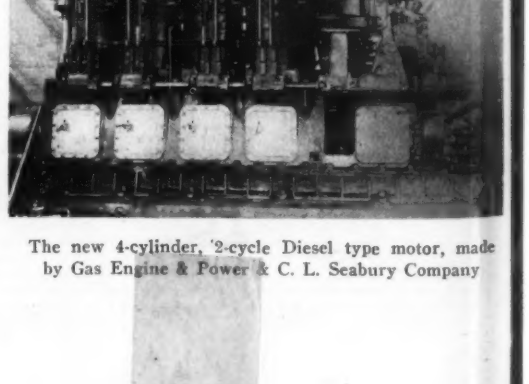
gives an added strength. Whilst all gears, camshafts, etc., are covered, and nothing is exposed, every part of the engine is readily accessible, the large hand-hole plates in the base being especially handy in making adjustments inside of the engine. The reverse gear and clutch, a very important part of the engine, is of the planetary type of special Sterling design, and has proved, through years of hard service, to be reliable under all working conditions. The same care in workmanship and choice of material is bestowed on this engine as upon the larger types, and it can be relied upon to do its work in an economical and consistent manner. The compact, silent and reliable features of this engine, combined with the power, make it an especially good plant for fishing boats, auxiliaries, family launches and small cruisers. The net price, with complete equipment as specified in the Sterling catalogue, is $450 f. o. b. Buffalo.

The 1914 Sterling engine catalogue has just been published. This book is something of a radical departure from previous catalogues issued by the Sterling Engine Company, and, in fact, from previous catalogues issued by any firm. It contains 48 pages, and has been laid out with the idea of making it a simple and quick matter to obtain complete information on any one of the twelve different Sterling models. Instead of having to turn to a half a dozen pages to obtain full information on any one motor, the complete data is given on one sheet; on one side there is an interesting description and on the other side will be found the principal specifications, foundation plans, full details concerning equipment and the net prices, making it possible to obtain all information necessary to order an engine right from this one sheet without turning to another page in the book.

The book is a credit to the Sterling Engine Company, to the firm that printed it and to the marine engine industry at large. The Sterling Engine Company advise that a copy of this book will be mailed to anyone requesting same by mentioning this magazine. Address Sterling Engine Company, 1258 Niagara Street, Buffalo, N. Y.

"Speedway" Boats and Motors

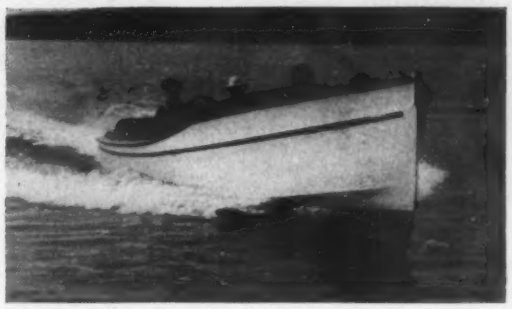
The exhibit of the Gas Engine & Power Company and Charles L. Seabury & Co., Con., Morris



The new 4-cylinder, 2-cycle Diesel type motor, made by Gas Engine & Power & C. L. Seabury Company

"Hand-V-Bottom" Motor Boats

Combine seaworthiness, ability and speed



Voodoo, a 24-ft. Lawley-build "HAND-V-BOTTOM" runabout with a guaranteed speed of 20 miles. A *real* boat.

A duplicate of this boat ran from New York to Digby, Nova Scotia, and return last summer—2,000 miles on the open sea.

"HAND-V-Bottom" boats are easily constructed, are the best sea boats ever designed, are faster and easier to drive than the round-bottom type and have the maximum of room and comfort.

I can supply the completed boat as above or you can build from my designs.

Easily constructed—no steam bending.

WILLIAM H. HAND, JR.

First National Bank Building **NEW BEDFORD, MASS.**

Devoe Holland Yacht Enamel

Makes cabins and deck houses glossy white. Keeps them white. Good for all exposed parts. Easy to apply. — TRY IT.

Send for "How to Paint a Boat" free, friendly, full of facts.

F. W. Devoe & C. T. Raynolds Co.
Marine Paint and Varnish Specialties
114 Devoe Bldg., New York

LAWLEY-BUILT

Motor Boats, Cruisers, Auxiliaries and Engines

None Finer Built Anywhere

Are conceded to be equal to the finest in the world. There is no higher expression in the art of boat building than the product of this organization.

We build all types of boats from a ten-foot yacht tender to the largest auxiliary yachts. Wood, steel or composite construction. We work from designs prepared under our own supervision or from your naval architect's plans as preferred. Every detail of construction from start to finish is handled within our own works.

Lawley facilities are unequaled. We have the largest and best equipped plant of its kind in America. Modern manufacturing methods and careful workmanship by experienced boat builders are responsible for our ability to maintain Lawley quality.

For those wishing a power equipment we can guarantee as unreservedly as our boats, we build Lawley heavy Duty Motors. Four-cycle, two, four and six-cylinder, eighteen, thirty-six and fifty-four horsepower respectively. Also steam.

Correspondence solicited from prospective boat buyers. Our catalog sent on request.

George Lawley & Son Corporation

Established 1866 **Neponset, Mass., U. S. A.** Cable Address "Lawley, Boston"

Steering Gears

and MARINE FITTINGS for

Power and Sail Yachts

Edson Manufacturing Company
Established 1859
260 Atlantic Avenue Boston, Mass.

GENUINE HARTHAN PROPELLERS

INSIST THAT IT'S A HARTHAN

THE HARTHAN PROPELLER
Reg. U. S. Pat. Off.
(TRADE MARK on each blade.)

Should be on every power boat

Send for Catalog and be convinced

McFARLAND FOUNDRY & MACHINE CO.

3 BREUNIG AVENUE
TRENTON NEW JERSEY

21-foot, bright yacht tender, built by Gas Engine & Power & C. L. Seabury Company

Heights, N. Y., at the Motor Show at Madison Square Garden will consist of three open launches and four sizes of "Speedway" motors.

The largest of the boats will be a 50-foot mahogany, sea-going runabout. The intention of the builders of this boat was to construct as seaworthy a boat as possible for her size, style and speed. She is planked and finished in bright mahogany. There will be arranged under the forward deck a space for storage. Next aft is the motor compartment, with hinged covers and two ventilators arranged forward. Following this compartment is an unusually large cockpit, 20 feet in length, the forward part of which is separated by a 'thwartship seat for steersman. The cockpit is arranged for chairs with 'thwartship seat at the after end. This boat is powered with a six-cylinder, 6-inch by 6-inch "Speedway," 60-80-horsepower motor, giving her a speed of 15 miles per hour. There will be a "Speedway" top over the cockpit.

There will be also a stock 30-foot "Speedway" runabout, with a roomy cockpit, with motor forward under hinged covers and separated from the cockpit by a bulkhead. The cockpit is arranged for chairs with 'thwartship seat at after end. The other boat is a stock "Speedway," 21-foot, clinker-built yacht tender. The motor is placed forward under hinged covers and separated from the cockpit by a bulkhead. The steering wheel controls, reverse lever, starting crank and gauges are located at this bulkhead. She is powered with a four-cylinder, 16-20-horsepower "Speedway" motor, with aluminum base, giving her a speed of from 15 to 16 miles per hour.

The "Speedway" engine exhibit will consist of a four-cylinder, four-cycle, 4-inch by 4½-inch, 16-20-horsepower motor, with aluminum base; a six-cylinder, four-cycle, 6-inch by 6-inch, 60-80-horsepower motor; a 7-kilowatt electric lighting set, and a 175-horsepower "Speedway" fuel oil engine.

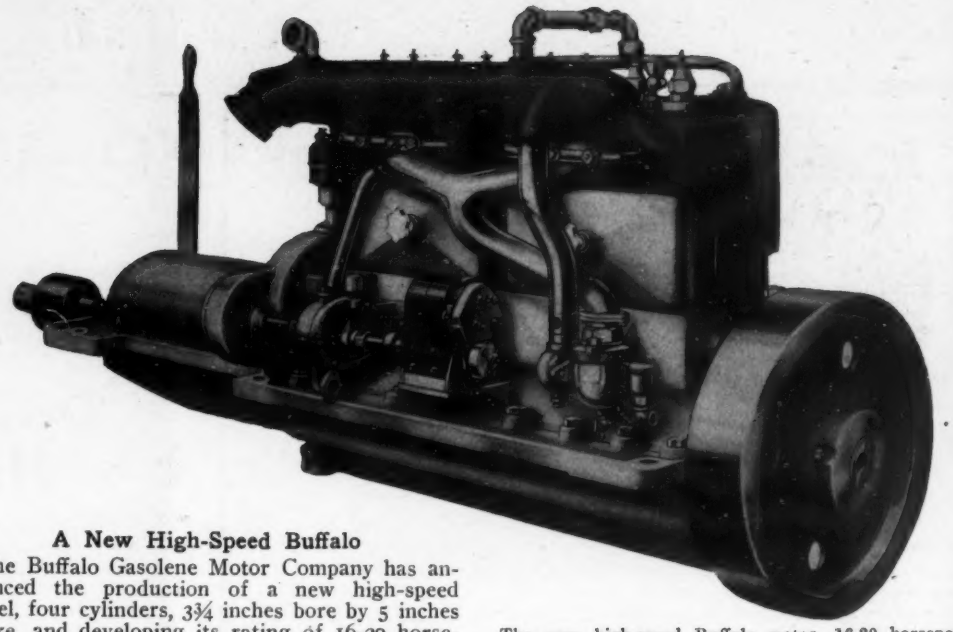
This latter is a four-cylinder, two-cycle engine of the high-compression or Diesel type, self-reversing, with single scavenging cylinder driven from a separate crank on the after end of the engine. The cylinders are 9 inches bore by 12 inches stroke, and are fitted with loose heads.

1914 Evinrude Motors

The Evinrude detachable rowboat motor will again be seen at the shows this year just as it was last, with the exception, perhaps, that the Evinrude now has even more interesting features, if this be possible, than it did a year ago. It seemed to the Evinrude Company impossible to improve the basic construction of their motor, as it was already mechanically correct. But a valuable addition to the equipment for 1914 is a built-in reversible magneto and Bosch plug. This magneto does not take up any additional room; nor does it increase the weight, as they have made room for it within the flywheel. It may be easily examined by simply removing the flywheel, which is done by taking off the lock-nut which holds the wheel in place.

In addition to the ordinary motor, which is 2 horsepower and weighs 50 pounds, they have added a 3½ horsepower for commercial uses.

The Evinrude Motor Company have just issued a new catalogue which is quite remarkable, as it shows the many uses to which their motor can be put, and shows photographs of it in all parts of the world. This is most interesting, and copies of it are being sent free upon request.



The new, high-speed Buffalo motor, 16-20 horsepower at 800 revolutions. Weight 550 pounds

A New High-Speed Buffalo

The Buffalo Gasolene Motor Company has announced the production of a new high-speed model, four cylinders, 3¾ inches bore by 5 inches stroke, and developing its rating of 16-20 horsepower at a normal speed of 800 revolutions per minute. This new model combines the sturdy qualities of Buffalo construction with light weight, the weight complete, with reverse gear and full equipment, being only 550 pounds.

The designers of this engine claim that it is the very last word in high-speed construction. The valves, gears, and in fact, all working parts are inclosed, though easily accessible by means of large panels. All parts are accessible, including the camshaft, which is removable and runs in three bronze bearings.

The cylinders are of the "L" type, cast in pairs of close-grained gray iron. They have large panels on the side of the water-jackets for cleaning. The base is of aluminum, and contains the crankshaft bearings, which are removable. The pistons are made from gray iron, four rings to each cylinder, and all located above the piston pin. The pins are of steel, case hardened and ground and clamped by the connecting rod oscillating in the piston. The crankshaft is drop-forged steel, the pins and bearings being ground.

The lubrication is by means of a constant-level splash system, and a large capacity rotary air pump forces a stream of oil on all four crank pins. The cooling system is of the most perfect design. Water enters the water-jacket below the valves, leaving at the top of the opposite side. The water pump is bronze and of the rotary type.

The new model is equipped with high-tension double-ignition system, including a Bosch magneto and a separate distributor system.

In order to be able to produce what is really the highest quality of four-cycle marine engine in a small size, and at the same time compete with the low-priced engines of inferior design, the Buffalo company has found it necessary to produce these engines in a large quantity and to take the saving thus effected off the selling price. The first lot that is being built is 100, and they will be ready for delivery February 1.

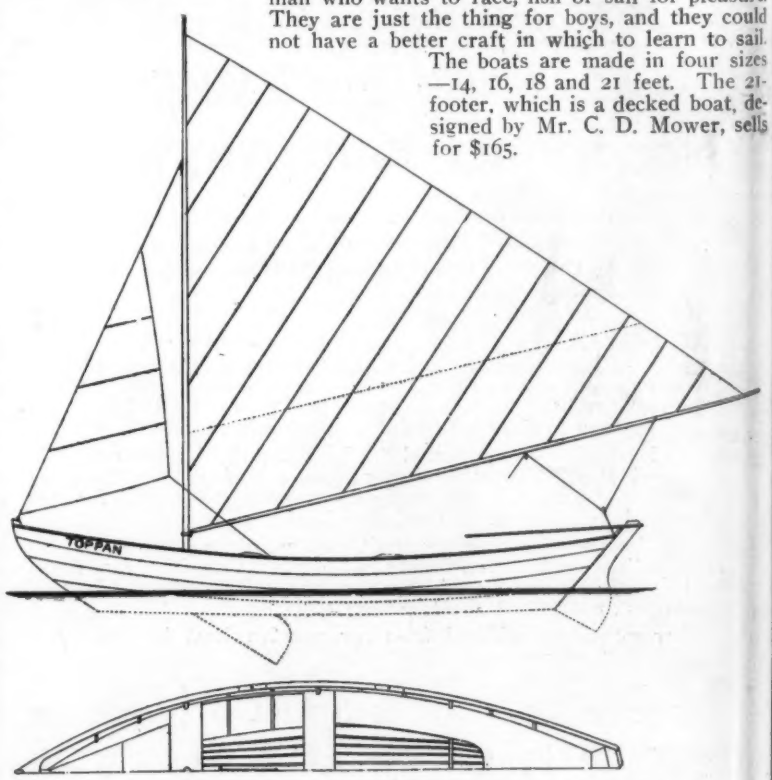
Some Interesting Toppan Dories

The Toppan Boat Manufacturing Company will exhibit at the New York Show one of the new 1914 model power dories similar to those just delivered to the United States Government for use in Alaska. This new 1914 model is an excellent all-round rough water boat. It is made in 18, 19, 22, 26 and 30-foot sizes. This New York Show boat is beautifully finished, with oak decks, polished brass fittings, full lockered seats and cushions, and has a 6-horsepower Gray motor, inclosed at after end of cockpit. This is a good arrangement for hard rough water service.

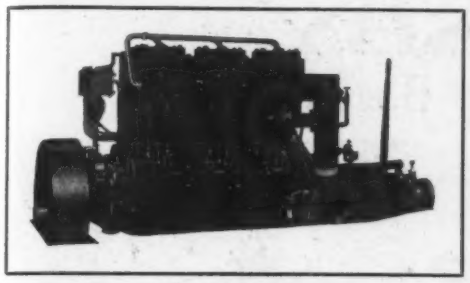
The $150 "Sportsman" is a 16-foot by 4-foot 7-inch boat, with a speed of 7 miles. It is an outfit that should be very popular for 1914, being a safe boat with good freeboard and enough bearing to be a fine family outfit. This boat, with its oak deck and bright finished seats and polished brass hardware, will make a special appeal.

Another very interesting little boat that is made by the Toppan Company is the small sailing dory, the plans of one of which are reproduced here. These boats are a handy, able little craft for the man who wants to race, fish or sail for pleasure. They are just the thing for boys, and they could not have a better craft in which to learn to sail.

The boats are made in four sizes —14, 16, 18 and 21 feet. The 21-footer, which is a decked boat, designed by Mr. C. D. Mower, sells for $165.



Toppan Sailing Dory, made in 14, 16, 18 and 21-foot sizes



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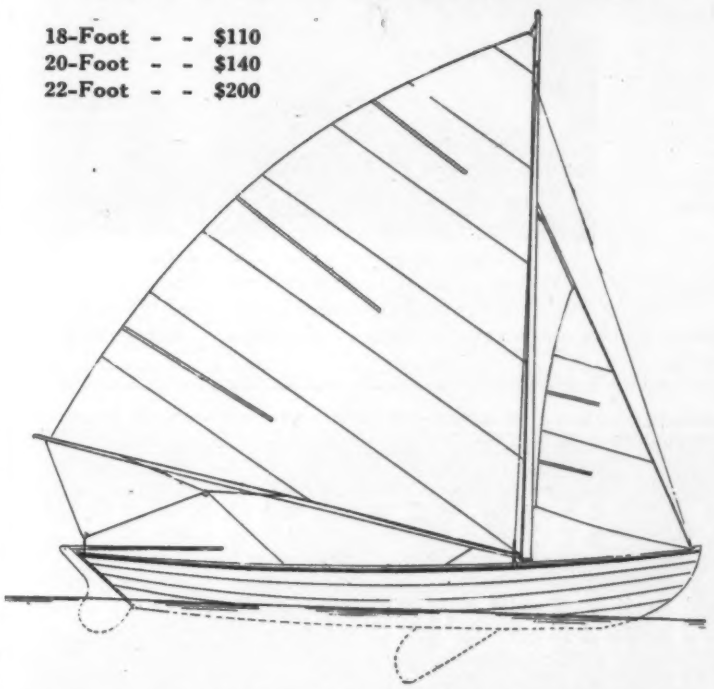

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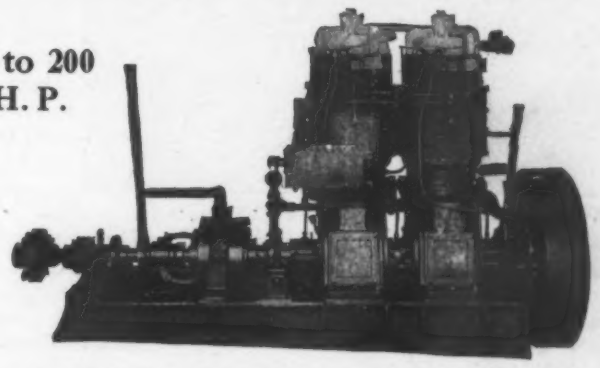

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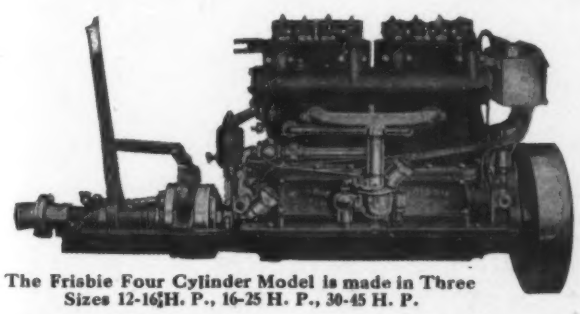

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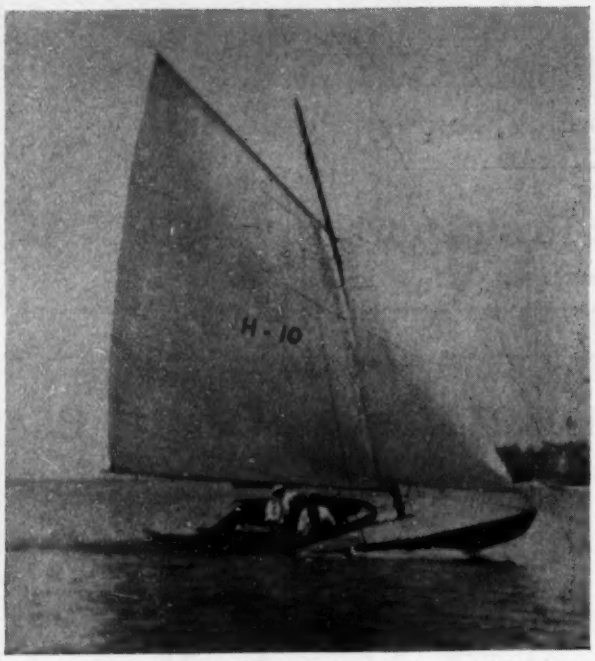

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CUBANOLA	" "
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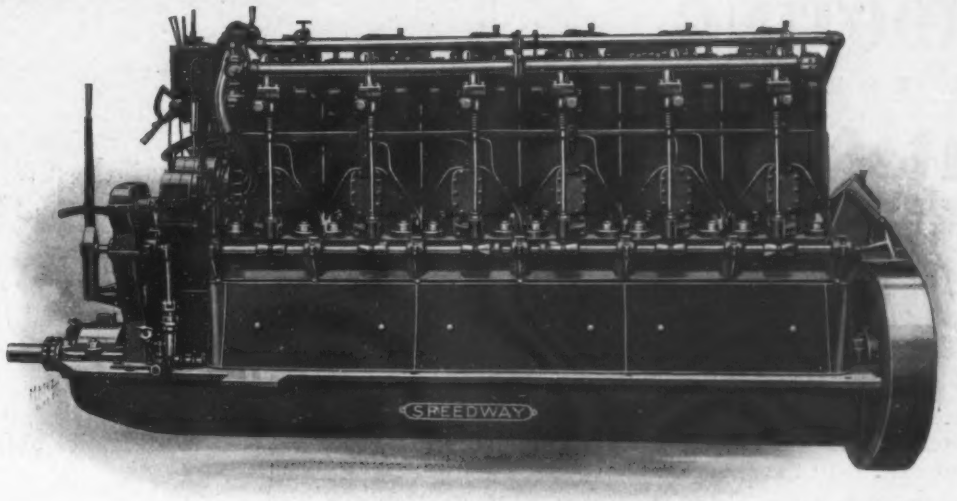

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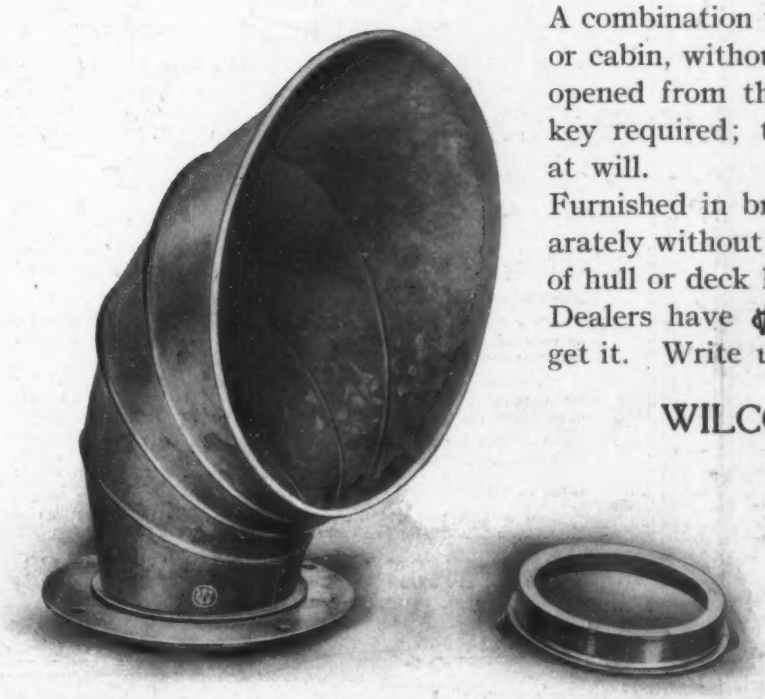

A combination that admits air and light into the engine room, or cabin, without the necessity of going on deck. Cannot be opened from the outside; when closed is flush with deck. No key required; two lugs on the under side; can be unscrewed at will.

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5	1	2	"	"	4⅝″	5	500	1¾″	280	110.00
7½	1	2	"	"	5 1/16″	6	450	2″	415	150.00
10	1	2	"	"	6½″	7	375	2 7/16″	675	200.00
6	2	2	"	"	4″	4	550	1¼″	300	165.00
10	2	2	"	"	4⅝″	5	500	1¾″	500	230.00
15	2	2	"	"	5 1/16″	6	450	2″	750	310.00
20	2	2	"	"	6½″	7	375	2 7/16″	1170	400.00
30	3	2	"	"	6½″	7	375	2 7/16″	2000	700.00
6	1	2	j. s. only	"	4⅝″	5	800	1¾″	270	98.50
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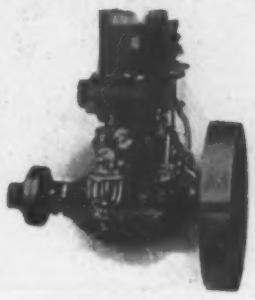

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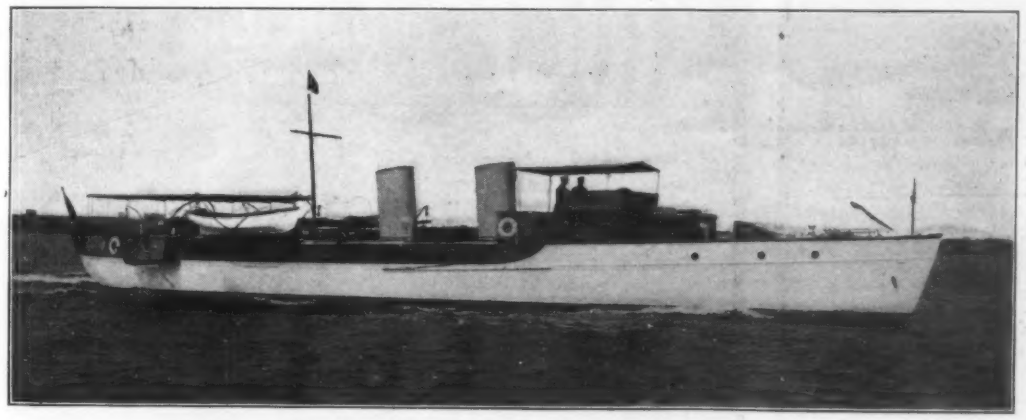

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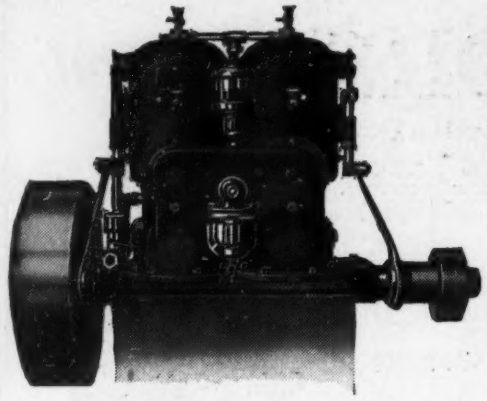

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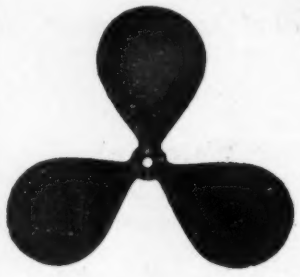

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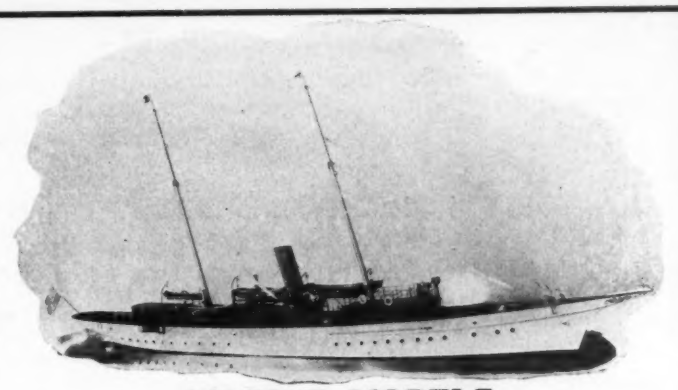

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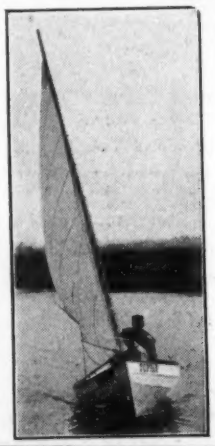

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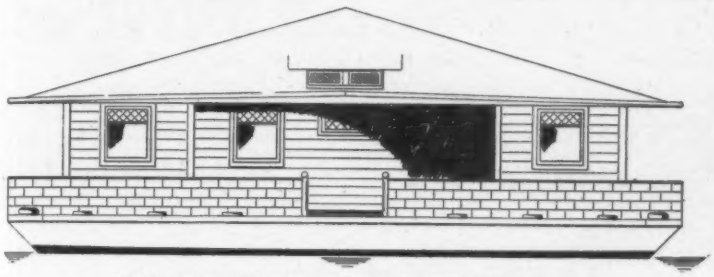

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